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An Address

ON

SURGICAL GASTRIC DISORDERS, THEIR TREATMENT AND RESULTS.

Delivered before the Blackburn Medical Society

BY E. STANMORE BISHOP, F.R.C.S. ENG.,

SURGEON, ANCOATS HOSPITAL AND JEWISH MEMORIAL HOSPITAL, MANCHESTER; PRESIDENT, MANCHESTER MEDICAL SOCIETY.

MR. PRESIDENT AND GENTLEMEN,—The word "dyspeptic" connotes not merely some defect in the ordinary process of digestion, but also a gloomy outlook on life, whilst "eupeptic" is synonymous with all that is happy, light-hearted, and gay. Such a correlation of ideas suggests a very close relationship, and emphasises to us, as medical men, the importance of a close study of all anomalies of the alimentary tract, and especially those which affect the primary segments, the stomach and duodenum. It is not merely life, but the *joie de vivre*, that which makes life worth living, which is more readily influenced by them than by diseases of almost any other organ.

Until the last 30 years the treatment of such diseases has been almost exclusively the province of the physician, gastro-enterostomy, the operation which has done so much to show the efficiency of surgical means, being first performed in 1881. Before this, surgical effort had been mainly directed against cancer of the stomach, and, as the surgeon was then usually called in only in the later and more hopeless stages of that disease, with extremely unsatisfactory results. But rapidly increasing experience from that time showed that there were many comparatively benign and some immediately dangerous states in which surgery could render important service, cutting short what had previously been believed to be essentially chronic disease, preventing in many cases what had been considered inevitable results, and rescuing from imminent death patients who in earlier times would have been perforce left to a painful but unavoidably fatal issue. It is to those conditions that I ask your attention.

Surgical procedures are to-day utilised in six distinct phases of gastric and duodenal disease:—(1) Perforation of gastric or duodenal ulcers; (2) acute or chronic gastric or duodenal ulcer during its course before perforation; (3) gastrectasia due to pyloric obstruction consequent upon cicatrisation of ulcers at or near the pylorus; (4) hour-glass stomach (bilocular, trilocular, &c.) also due to cicatrisation of ulcers in other parts of the stomach; (5) adhesions around old lesions dragging upon or compressing portions of the upper digestive tract; and (6) gastric carcinoma.

In the consideration of these various conditions I do not propose to make any feature of statistics, which are dry, uninteresting, and often misleading, since cases, although grouped under one name, very often resemble one another in but little else, but briefly to indicate their several points, followed by one or two illustrative cases, and to suggest the conclusions which they appear to indicate.

ACUTE ULCERS.

And first as to perforation of gastric or duodenal ulcers. With very short warning in the way of some discomfort after meals for a few weeks, the subject of this cataclysmic occurrence is suddenly struck down by intense pain in or near the epigastrium, which gradually subsides, or is cut short by morphia. Very soon, however, the pain returns, spreads over the umbilical region, or, if duodenal, down the right side of the abdomen, becoming more and more diffused over the entire area, and accompanied by rigidity at first of the upper recti, later of all the abdominal muscles. If left still longer rigidity disappears, peristalsis ceases, the abdomen becomes rapidly distended, and in the majority of cases, unless relieved by surgical means, death follows. I shall, however, later narrate a case in which undoubted perforation of the stomach occurred, as proved by an operation ten months after, which recovered sufficiently for the man to resume work under purely medical treatment.

Illustrative Cases.

At present I offer for your consideration two cases which illustrate, the one gastric, the other duodenal, perforation:—

CASE 1.—A man, aged 37, was admitted to Ancoats Hospital in March, 1909. On the morning of admission he considered himself in fairly good health; afterwards he admitted to one week's sensation of some pain after food, later to some hazy "few weeks." He ate a good breakfast at 7.15 A.M., and felt no pain after it. He continued at business until 5.30 P.M., having dined at mid-day off stewed steak and potatoes. He was washing himself previous to departure when something was felt to give way suddenly in the epigastrium. No immediate pain was felt, but there was a sensation of rapidly increasing weakness. As he walked with difficulty down a long room he became faint and short of breath. Half an hour later severe pain began in the upper abdomen, which became steadily worse until, he said, it amounted to agony one and a half hours later. He vomited once; the fluid rejected contained food, but no blood. Morphine was injected; relieved by this he was able to be removed to the hospital.

On examination there, great tenderness, increased by pressure, was found over the entire epigastric region, and there was rigidity of both upper recti, the lower segments being still supple. His temperature had fallen to 96·8° F., his pulse to 66, but his respiration was quickened to 36. He was not at that time in any great pain

The abdomen was opened five hours after the initial lesion. When the peritoneum was divided, gastric contents at once escaped and poured out in great quantity. When sufficient had been removed by sponges the stomach was drawn forward and a round punched-out opening was found surrounded by an area presenting a whitened, bleached appearance which faded away gradually into the normal colour of the stomach wall; the tissues were not thickened or indurated. The opening was closed by two superposed purse-string sutures, and after drainage had been arranged for the abdomen was closed.

This is an almost typical picture of the perforation of a gastric ulcer; and that of a duodenal is similar with some few modifications.

CASE 2.—A young girl, aged 19, was at work as a mule-tenter, when suddenly without any warning, about 4 P.M., she was attacked by violent pain in the epigastrium, bringing her to the ground. After a few minutes it became less intense, at the same time sinking to the umbilical level. After resting about half an hour she *walked* some 150 yards to the hospital. When examined the pain was so much less that she could with difficulty be induced to remain, but as both upper recti, and especially the right, were found to be rigid and there was general tenderness all over the epigastrium a diagnosis of perforated duodenal ulcer was made. The abdomen was opened four hours after the first appearance of pain and a pinhole perforation was found on the anterior duodenal wall from which fluid was issuing. The opening was closed and the patient recovered. Later, inquiry elicited a history of mild epigastric pain lasting for a month or two, beginning an hour after food and relieved by vomiting or by taking more food.

I requested my house surgeon, Mr. G. N. Braham, to write to as many as possible of these cases in order to obtain final results, and the reply from this one, I think, merits reproduction. She writes: "I am pleased to let you know that ..... since I have been improving in health I am going on the adventurous errand of going to be married. I now make a special thanks on behalf of my intended husband for the good you done to me so that we can be linked in wedlock." (Jan. 24th, 1911.)

Diagnosis.

The very short history in both these cases will be noticed, which no after inquiry during convalescence could shake; the sudden onset, in both some hours after food had been taken. These cases have been chosen mainly because they illustrate the two forms that onset may take, not at all as characteristic of any difference between the two *positions* of the ulcer, since in both the first symptom occurred some time after food, and the objective signs were much the same—but in order to show that occasionally pain is not the initial symptom. The first symptom in the first case was not pain—that did not become marked for at least half an hour—but there was a definite sensation of something having given way and this was followed—before the pain—by a sensation of increasing weakness.

On admission, in both cases the initial pain had much decreased—in the one case after a hypodermic injection of morphia, but without it in the other. Both patients were somewhat surprised at being told that an immediate operation was necessary. This is not uncommon, and a medical man seeing them for the first time during this period might easily be misled as to the gravity of their condition. The points of importance, those upon which the diagnosis was based, however, were the conjunction of three signs, and especially the presence of a fourth. The three conjoined signs were: low temperature, rapid pulse, and increased rapidity—and shallowness—of respiration. These alone with the history might simply mean shock, due to unusually severe colic, renal, biliary, or intestinal, or to some mental or other cause unknown. The presence of the fourth, rigidity of the upper recti, was, however, conclusive. This rigidity was marked, local, and persistent.

Value of Abdominal Rigidity as an Early Sign.

Perhaps I may be excused if I enlarge a little upon the importance of this sign in connexion with the vitally important early diagnosis, since it has been received with incredulity by some writers and a sort of contemptuous indifference by others. It is said by some to depend on "peritonism," a term of which no satisfactory definition has ever been given; in every case in which it occurs, however, it has marked the first stage of what will, if left alone, ultimately develop into undoubted peritonitis, and it therefore seems far more reasonable to consider it as marking the incipient stage of that inflammation.

For many years I have suggested the analogy between inflammation of this great serous cavity and that of other serous cavities, such as those of the joints. In acute inflammation of a joint the first and automatic sign is rigidity of the muscles which move that joint; this is recognised by the fixation of the bones acted upon by these muscles, and is known as Hilton's sign, since it was first described by that surgeon in his famous, though I fear now somewhat forgotten, book, "Rest and Pain."

The eye is another joint subject to the same law, and is peculiarly interesting, since it is, so to speak, split open naturally, so that we can see for ourselves the various changes taking place in it during the progress of the morbid state. Here, too, the first effect is the automatic contraction of the muscles entering into its composition, the orbiculares palpebrarum.

In inflammation of the abdominal serous cavity the first sign is similarly rigidity of the muscles acting upon the tissues which form the abdominal joint,[1] but in this case the rigidity of the external muscles themselves is the most easily recognisable; if the inflammation is general, all the muscles are affected; if partial, only those muscles or portions of muscles which are in connexion with the patch of inflamed peritoneum.

(Ordinarily we speak of each rectus muscle as a single muscle; but above the umbilicus each is really divided into three, not including the portion below this point. There seems reason to think that under pathological conditions each segment may act individually and as a distinct muscle.)

I have said that if the inflammation is general all the muscles are affected, and that does not mean merely those of the abdominal wall. It includes also the muscular coats of the intestines themselves. As a necessary consequence the normal movements of these muscles, peristalsis, ceases also, and therefore in the majority of cases there is, coincidently, obstinate constipation. But such coincident action naturally presupposes an antecedently perfect mechanism, and therefore this rigidity is most marked in these acute cases where perforation suddenly brings direct irritation to bear upon a previously healthy peritoneum. This automatic rigidity, the first and most trustworthy sign of acute peritonitis, does not, however, last very long, for the intestinal tube, especially the portion near the ileo-cæcal valve, contains a multitude of organisms, harmless enough in health, but which, when the conditions under which they exist in the body are materially altered, as they are in inflammatory states, become lethal and form poisons which derange that mechanism. Such derangement will result in the loss of rigidity and the occurrence of diarrhœa. The sign, therefore, is not, and cannot be, of long duration—it is not seen at all in chronic inflammations—but in the early stages of acute peritonitis it is always present and is to be entirely relied upon. Conversely, its absence is equally sound proof that acute peritonitis is not present. It must, however, be genuine rigidity and not the merely protective contraction due to fear of rough handling or the contact of a cold hand; such contraction will disappear rapidly if the examiner's hand is warm—and gentle; true rigidity will not.

Incidentally this symptom may be trusted to differentiate between colic of all kinds and peritonitis. In colic the irritant material, though its presence may be associated with quite as much pain, does not come in contact with the peritoneum, and therefore no actual rigidity is produced; in acute peritonitis there is actual contact between the irritating material, whatever it may be, and the peritoneal membrane, and rigidity is the result. This was well illustrated in a case sent to the hospital some few months since by an extremely smart practitioner who, however, has not yet shaken himself free of the old teaching as to peritonitis; curiously enough, his view was shared by a "medical" consultant whom he had called in before bringing his patient, as he did, in his own motor several miles for immediate operation. The history given was that the day before the patient, a woman, had been attacked by severe pain and vomiting, which had continued during the night and had been associated with constipation. During the journey she had another severe paroxysm of pain, and her medical attendant felt certain, as he told me, that she had commencing peritonitis. On examination, however, the abdomen was flaccid and no rigidity could anywhere be found. Depending upon the absence of this sign, though its significance was confirmed by the character of the pulse and the appearance of the face, but mainly upon this, the reliability of which I have so often verified, operation was decided against, and four or five days later the patient returned home well. In these days, when the necessity of early diagnosis is so much and so advisedly insisted upon, there is, perhaps, a risk of seeing "peritonitis" too frequently, and it is well to have a symptom, upon the presence or absence of which one can safely depend, to settle this question, especially as it is in these sudden acute cases that it appears most automatically.

CHRONIC ULCERS.

So much for acute ulceration. These cases are, however, rare as compared with those of the chronic type, which are of supreme interest at the present time. Here are specimens of some of the most usual forms seen. The points worth note are—

Various Types.

1. The *terracing* of these ulcers (Fig. 1). It is now generally believed that a chronic ulcer commences by the detachment of the mucosa over a small area from the nutritive tissues below by some material, gumma, tubercle, or simple clot produced by the rupture of a blood-vessel, which separates it from its ordinary blood-supply. The mucosa so detached necroses and is cast off as a slough or is digested, thus opening the way for gastric juice to act upon the unprotected tissues beneath. These may later become to some extent protected by the abundant mucus

FIG. 1.

Terraced chronic gastric ulcer.

[1] The word "joint" is usually associated with the presence of bone and cartilage, but these are by no means essential elements. The essentials of a joint are, first, two surfaces capable of movement upon each other; secondly, a lining membrane secreting a fluid which renders such movement easy and painless; thirdly, muscles capable of actuating such movement; and, fourthly, a reflex nerve arc, through which afferent impulses coming from these surfaces pass to a spinal centre and excite efferent impulses actuating the muscles which bring about such movement. The abdominal cavity is precisely such a "joint."

FIG. 2.

Peritoneal aspect of a perforated chronic gastric ulcer.

FIG. 3.

Mucous aspect of same ulcer as in Fig 2.

FIG. 4.

"Saddle" ulcer, with perforation in right-hand corner.

FIG. 5.

X-Ray photograph of dilated atonic stomach. Note the air chamber above. The fundus, which is not well shown, but which could be clearly seen in the negative, lies immediately above the pubis.

FIG. 6.

Atonic dilated stomach due to carcinoma of the pylorus. The gastric wall was so thin in parts as to show the black background through.

FIG. 7.

Recurrent ulcer after excision and reunion of walls. Note position of the (originally) external thread. (By courtesy of Dr. Andrewes, St. Bartholomew's Hospital.)

secreted by the sympathetically irritated glands around, or, as Katzenstein has shown, by the production of an increasing antiferment which neutralises the action of the pepsin present. Whatever be the reason, the digesting agent appears to act with less and less ease as it penetrates more deeply, and the ulcer sides are therefore not cleanly cut, but descend in steps which are well shown in this and other cases.

2. The peritoneal coat resists most strongly and may be extensively bared before it yields at some small point, as in Fig. 2.

3. Frequently during the process some small vessel is eaten into and copious hæmatemesis may be the result, or if perforation also occurs the abdomen may be full of blood mixed with gastric contents.

4. The greatly contrasted extent of the lesion consequent upon this within and without the stomach is well seen in the photograph of the same ulcer seen from the interior of the stomach (Fig. 3).

5. The peculiar shape affected by ulcers along the lesser curvature. These are specially suggestive of hæmorrhagic origin. As is well known, the coronary artery running along this curvature gives off numerous branches which run at right angles to it. If one of these gave way and a clot were formed, it also would lie in the same direction, would be of greatest volume near the origin of the vessel, and taper outwards towards its extremity. Fig. 4 shows such an ulcer extending outwards on both anterior and posterior walls from a common centre in the lesser curvature. Such an ulcer has been called a "saddle" ulcer, both from its shape and because it seems to bestride this edge of the stomach.

6. Though single ulcers are, at least in my own experience, the rule, they may be multiple. In such a case various stages in their formation may be studied on the same preparation. An ulcer which has only reached an early stage may be unrecognisable from without; were surgical interference limited to excision or inversion of the more marked lesion, the other would still enlarge and might later perforate; gastro-enterostomy alone favours the healing of both.

Previous History.

Much stress has been laid, and justly laid, upon the anamnesis in the question of diagnosis, but patients differ in the clearness of their statements and in their power of giving a correct or even connected story; much tact and great patience are often required, therefore, as well as a definite idea on the part of the examiner as to the relative value of the various points which he may elicit. Some confusion has arisen because it has been difficult to separate the essential symptoms from those dependent upon later changes, but this is gradually disappearing.

The usual history of a patient possessing a chronic gastric ulcer is that of a series of attacks of epigastric pain coming on at a more or less definite time after food. The patient may be of either sex. Usually the age at which a medical man is consulted is that of middle or advanced life, and the impression patients usually apparently wish to convey is that the history of their complaint is but a short one. On more careful inquiry, however, it will be found that they are only speaking of their last attack, which may have been somewhat more severe than those previously experienced; they will, if pressed, admit that for years they have suffered from discomfort after food with periods between of perfect freedom—a freedom in some cases so complete that it is difficult for them to realise that any connexion exists. No satisfactory explanation has yet been given for these periods of freedom from active symptoms, unless it is to be found in Bolton's experiments on dogs, and to be coincident with actual healing of ulcers situated in regions where their cicatrisation does not interfere with free evacuation through the pylorus. Bolton produced actual gastric ulcers and showed that when once the sloughing stage was complete and the slough had separated, so long as there was no obstacle to free evacuation of the stomach contents, there was a natural tendency for such ulcers not merely to heal, but for their bases to become covered once more with normal mucosa in which normal gastric glands were again present. If, however, they involved the pylorus, and consequently attempts at cicatrisation tended to obstruct that orifice, healing did not take place. These intermissions are an integral fact in the diagnosis; the same symptoms in a person of middle or advanced life, with no history of previous isolated attacks, are far more suggestive of commencing carcinoma than they would be were such a history obtainable.

Picture of Attacks.

The descriptions given of such attacks vary necessarily. Not only will an ulcer on the lesser curvature produce a different picture from that of one at or near the pylorus, but in the same case there will be differences at different times owing to the presence or absence of adhesions around. In the earlier attacks such adhesions will not be present; in later ones they are frequently to be found, uniting the stomach to liver, pancreas, omentum, gall-bladder, or transverse colon, and, by the drag exerted by their contraction upon these, adding new and non-essential symptoms which may overshadow those characteristic of the gastric lesion.

The characteristic picture, that of the earlier attacks, is the following. There is epigastric discomfort, weight, sense of distension, sometimes actual pain, occurring at a more or less definite time after the taking of food, usually from three-quarters of an hour to two hours after. This serves to distinguish between gastric ulcer and cholelithiasis, in which condition also the taking of food may induce discomfort, but in this latter, malaise arises during the actual meal, which is in consequence often left unfinished. In addition, breathlessness, even asthma after or towards the end of a meal is not uncommon in conjunction with the cholecystitis accompanying biliary calculi; unless adhesions exist between the gall-bladder and the stomach, this does not seem to occur in gastric ulcer.

In gastric ulcer there is freedom from pain directly after food; this is perhaps the time when the patient is most comfortable. The appetite for food is not impaired, thus distinguishing from gastric catarrh or succurrhœa. There is a good appetite, though often enough, warned by previous experience of its later effects, the patient has conceived the idea that certain articles of diet are more harmful than others, or that a full meal is productive of more pain than a restricted one, and he will in consequence eat but a small amount at any one time and carefully avoid certain kinds of food, thus giving the impression that his appetite is at fault.

The time at which pain or discomfort will come on after food will vary with the position of the ulcer; it will occur earlier if the lesion is in the cardiac area, later if near the pylorus. Indeed, when situated at this point, it is almost impossible to differentiate from duodenal ulcer by this test of time alone. It was believed that duodenal pain was felt at, and after, the moment when, digestion having reached a certain point, the pylorus opened and the acid gastric contents were allowed to pass, but Hertz showed by means of the Roentgen rays that food had already been passing into the duodenum for some time before the duodenal pain began. Such pain, therefore, must depend rather upon the degree of acridity of the material passing than upon its mere contact. So far as time is concerned, a safer point upon which to rely for the diagnosis of duodenal ulcer is the occurrence of early morning pain; pain, that is, which wakens its victim and is best allayed by the taking of food, biscuits or thin bread-and-butter. This appears to be characteristic of duodenal irritation and is not observed in the purely gastric variety. It may, however, occur in simple duodenal catarrh.

The ultimate diagnosis between such cases will be made after careful tests of gastric contents and of fæces, remembering especially those for occult blood. Radiographic observations are also of much utility, since they throw light upon the motility, tone, and irritability of the gastric or duodenal walls, the patency or otherwise of the pylorus, and the prospects of success after operation.

Progress of the Ulceration.

The further progress of such ulceration appears to lie in one of four directions: either towards healing, if the pylorus is open, and the patient is placed under efficient medical direction, or towards late perforation on the one hand and gastrectasia following contraction of the scar, if near the pylorus, or bilocular stomach, if the scar is farther away, on the other. The fourth is the imminent danger of carcinoma implanted upon such a scar, the most distressing result of all. And this danger of carcinoma is by no means rare. Sonnischen found 14 per cent. of 156 cases of gastric cancer examined post mortem in the Pathological Institute at Kiel undoubtedly

developed from ulcer, whilst in a second series Klauss found 26 per cent. Stich declares that ulcer carcinoma constitutes 30 per cent. of gastric cancer. Mayo found 54 per cent. of the cases of gastric cancer at Rochester in which both the clinical history and pathological examination made it certain that they had originated in ulceration, whilst Robson reports no less than 59·3 per cent. of his cases of cancer as giving a previous history of chronic ulcer.

Healing of an ulcer may occur, and probably does occur, in all prolonged cases from time to time. The characteristic intervals between the several attacks are distinctly suggestive of this, but such healing is not necessarily followed by cessation of the symptoms. The following case, to which I have already referred, is evidence of this:—

CASE 3.—The patient, a male, aged 59, was admitted in November, 1907. For two years this man had suffered from epigastric pain two hours after food with occasional vomiting. Several times the vomitus had contained material like coffee-grounds. Twelve months previous to admission a very sudden and severe attack of abdominal pain came on some little time after his return to work from dinner. He became collapsed and remained in that state for some hours. He was taken home, kept in bed, and treated medically. After several weeks' illness he recovered sufficiently to do some work, but was never well. At the time of admission he said that he felt most comfortable in the morning, though he had no appetite for breakfast. Two hours after dinner, which he enjoyed, a feeling of distension with dull aching pain was felt and lasted all the afternoon.

The abdomen was opened. On the anterior wall of the stomach was a thickened, puckered area, with the appearance of scar tissue. To the centre of this a patch of omentum was firmly adherent. The posterior no-loop operation was done and recovery was rapid and perfect; there was no further pain, distension, eructations, or vomiting. He writes now, more than three years later:—"I am in splendidhealth, never better in my life. I have never had any return of the vomiting or the slightest pain after eating, and can eat anything without having to suffer the slightest discomfort and can eat a supper and have a good night's sleep after—a thing I could not do for years before the operation. *Now* life is worth living, *before* the operation it was one long misery ..... so you will see from the above that I have derived immense benefit, and if it had not been for it I feel sure I should not have been here to-day."

Late perforation of a chronic ulcer will sometimes be found. In such cases there is frequently some leakage for a while before the full yielding of the gastric wall. If the ulcer be situated anteriorly, and the amount lost at any one time be small, around the point of exit adhesions may form, aided by the efforts of that policeman of the peritoneal cavity, the omentum, which, as in the last case, may close it again, but the escaped fluid may also induce slight pelvic peritonitis, otherwise not to be accounted for. Last year Dr. A. W. W. Lea of Manchester recorded three such cases in women, and I have myself seen four which appeared only explicable on some such hypothesis. If the lesion is on the upper or posterior surface, subhepatic or subdiaphragmatic abscess may be produced. In other cases when the opening is large practically the same symptoms may be seen as in the perforation of acute ulcers, but the history obtainable is a far longer one, and will probably include large losses of blood by vomiting.

Advantages of Gastro-enterostomy done at First Operation.

The treatment by immediate laparotomy followed by closure of the gap is, of course, obvious. Mere closure may at the time be all that is practicable. The state of such patients is such that surgical interference must be reduced to the minimum which is at the moment sufficient. But, if possible, gastro-enterostomy should also be done at the same time. If possible, because closure of the ulcer, if it is to be effective, may interfere so greatly should the ulcer be in the pyloric area—the most probable area—with the onward passage of food that acute dilatation and death may follow rapidly, or should the patient escape this his vitality may be so reduced by the abstention of food by the mouth or by the alternative vomiting produced by the attempt to take it that he may not be able to bear any future interference.

Such a case was seen in conjunction with my friend, Dr. T. B. Riddall of Longsight, in April last year. The patient, a male, 56 years of age, gave a long history of stomach ulcer, culminating, on the morning he was seen, in sudden perforation. Without delay he was removed to a surgical home and laparotomy performed about 12 hours after. A widely open gap was found in the pyloric area, through which much material had passed, and the peritoneum was pretty full; this took a little time to remove, which, added to the time expended in careful suture, seemed to be as much as he was fit to bear. The abdomen was therefore closed, and the gastro-enterostomy, which was evidently required, postponed until a later date. Rectal feeding, with proctoclysis was at once started, but after three days the rectum became irritable and refused to retain anything. Tentative feeding by the mouth was substituted, but this gave much discomfort, only relieved by vomiting, which still further exhausted the patient; it was evident after a day or two that food could not pass through the much constricted pylorus, and that, unless another exit was provided, the patient would die from starvation. Up to this time, but for the difficulty of alimentation, progress had been satisfactory; there was no peritonitis; respiration, pulse, and temperature were all normal, and there seemed no reason to think that he would die, if we could but feed him. On the seventh day, therefore, gastro-enterostomy was done. The peritoneum was healthy; indeed, it was curious to see how quickly, after so much irritation, it had returned to a normal condition; but although food was now taken and retained, the shock of the second operation was too great, and he died 24 hours later from pure asthenia.

Gastrectasia.

Gastrectasia is not an uncommon result of pyloric contraction due to the scarring of an ulcer in this region. Here is an X ray photo (Fig. 5) of such a dilated and atonic stomach. Above, the usual air-chamber is clearly seen, immediately below the diaphragm, whilst the fundus reaches almost to the pubic arch. Also an ordinary photograph (Fig. 6) of a portion of a dilated stomach, in which the extreme tenuity of its walls sometimes attained may be appreciated. In this case cancer had followed ulceration and the obstruction had been prolonged, and such an amount of thinning is unusual, but it is not seldom approached. The most important consideration which these two illustrations demonstrate is that a stomach which shows signs of dilatation should not be left too long, since any operative interference would be useless in such cases. The tone of the gastric walls, once lost, does not appear to be regained, and operation, however well planned and carried out, would necessarily fail.

Bilocular Stomach.

Bilocular stomach is the result of contraction of the scar of an ulcer seated astride the lesser curvature—a rather favourite site for a chronic ulcer. I have shown a well-marked specimen of this. As this ulcer heals it pulls the greater curvature nearer and nearer to the lesser at its own plane until the cavity may be almost divided into two pouches, connected only by a narrow tube lying just below the lesser curvature. The symptoms produced by this condition are well known; I merely wish to draw attention to the help rendered by radiography in adding certitude to the suspicions aroused by them. The patient was a woman, 33 years of age, and had complained of intermittent attacks of vomiting for eight years, with pain coming on at various periods after food. Radiography demonstrated most clearly the separation of the stomach into two pouches. She was operated upon in January, 1909, both gastro-gastrostomy and gastro-enterostomy being done. She writes now: "Just at first, after leaving hospital, I used to have often returns of the sickness, but for the last twelve months I feel better than I have ever done in all my life. I am now feeling strong and well and eat most things in reason. ..... I returned to my work in May after the operation, and with the exception of a week for a bad cold and a few days through being run down, I have not had a day off since; before I could never keep up more than three months at a time."

But X ray photographs sometimes suggest bilocular stomach when such a condition does not really exist. Such an appearance is usually due to spasm of the transverse band which marks off the cardiac from the pyloric area and may be due to an ulcer on the lesser curvature, but is strongly suggestive of appendicular disease which by reflex action may produce symptoms very difficult to distinguish from those due to gastric or duodenal ulceration. Besides such X ray appearances, perhaps the most useful guide is to be found in the fact that vomiting in the cases of gastric lesion always gives relief, whilst it has no effect in those in which the lesion is appendicular. I have lately published two cases referred to me as cases of gastric ulcer, in which, on operation, no sign of any lesion could be found in either stomach or duodenum, but in both of which well-marked appendicular chronic inflammation was present. Moynihan

was the first, I believe, to note this fact, and has himself given details of several instances.

Results of Operation.

It is, however, in cases of gastric or duodenal ulcer, before dilatation to any marked extent, or the implantation of cancer has complicated matters, that the best results from operation are obtained. Curiously enough, it appears to be an advantage if the lesion is situated, as it so often is, in or near the pylorus, and that opening is becoming obstructed by scarring. The most brilliant results are seen in such cases, so much so, that certain operators have advocated and practised the closure of this orifice by suture or ligature in cases where the ulcer was in a different situation. Frequently with a pyloric or duodenal ulcer inversion or excision of the diseased area will result in practical occlusion of the normal passage. That does not matter if gastro-enterostomy is done, as the new stoma prevents any accumulation of contents, but I doubt if an artificially produced occlusion is indicated. Mucous surfaces will never adhere, however closely they are opposed, and sutures or ligatures in the intestinal tract tend invariably to make their way into the lumen of the gut to which they are applied. This was known as early as the days of Travers, but some believed that this tendency was attributable to the septic character of the sutures then used, and that it would not occur if the suture were sterile.

I am able, by the courtesy of Dr. F. W. Andrewes, of St. Bartholomew's Hospital, to show a photograph (Fig. 7) taken after excision of a chronic ulcer in which the internal suture—of gut—has disappeared and the outer suture—of aseptic silk—has slowly worked through in the classic fashion until it now, knot and all, is lying almost loose in the interior of the stomach. This figure is very instructive for other reasons. It shows the uselessness of catgut for the mucosal surface. The edges of the mucous membrane at the line of union have parted, the gut having been digested too soon, and contact of the gastric juice with the deeper layers has thus been permitted, in consequence of which a second ulcer has been produced by its action. It also gives some data as to the time required for the formation of such an ulcer, since three months elapsed between the time of excision and the post-mortem examination at which this was found, but above all I think it shows the uselessness of applying any ligature to the pylorus, the effect of which can only last as long as the ligature exerts its mechanical pressure outside the gut.

One reason for this proposed closure of the pylorus is the fact that the contents of all tubes in the body tend to make their way, if they possibly can, through the natural channel in preference to any artificial opening; whilst any spasm or temporary constriction of such a channel, if it can obtain rest for a time, tends to pass away. A good illustration of this is seen after perineal section for urethral stricture; at first all urine escapes through the new opening, but later, even if nothing is done in the way of dilatation, the stricture dilates, the spasm which has accentuated it passes away, and urine in larger and larger quantity comes through the urethra, less and less by the artificial opening, even though this is apparently the more easy and direct route. This appears to be a natural law, and obtains also with the artificial stoma produced by gastro-enterostomy. Those who look upon this operation as only of use if it can be made permanent naturally wish to prevent this, though they fail, and I think are bound to fail, for the reasons stated. But that does not diminish the usefulness of, nor the necessity for, the operation. In those cases of organic stricture at the pylorus, where the necessity for a permanent opening exists, the new stoma will remain open; in those where the constriction is temporary, due to spasm produced by an ulcer at a distance from this valve, but equally requiring relief at the time, the natural passage will again become free, and the stoma possibly close, but this will not happen until the ulcer has healed and the irritation caused by its presence has disappeared. A tracing on the radiographic screen taken six months after the operation shows that food is once more passing through the pylorus, though still some finds its way through the new stoma.

The "Modern" Operation of Gastro-enterostomy.

The reputation of gastro-enterostomy as now performed has suffered greatly from the results of the earlier attempts which were bound to be tentative. At first performed as a means of relief in a case of gastric cancer where excision was impossible, the earliest method was essentially crude and experimental. A loop of jejunum was brought up over the transverse colon and united to the anterior gastric wall. Crude as this expedient was, it gave great relief in that case and was repeated in many others, but it was speedily recognised as possessing many and serious drawbacks. Chief amongst these was "vicious circle vomiting." The loop of intestine fixed was long, and when distended with contents, heavy, and kinking of the gut almost always followed, if the patient lived long enough, at or near the site of union. Such kinking delayed the onward passage of material in the afferent limb, which consequently became distended and dilated. When peristalsis at last overcame the obstruction, so great a rush of fluid occurred that the stomach was flooded by jejunal contents, which it at once rejected through the mouth, and the last state of the patient was worse than the first. The loop of small gut also pressed upon the transverse colon and painful griping was added to the patient's sufferings. Von Hacker eliminated the long loop by his posterior method, in which the first part of the jejunum was united to the posterior gastric wall, but at that time and for long afterwards it was believed that one essential to success was that the peristaltic wave in both stomach and intestine should pass in the same direction. In order that this might be the case it was necessary that the jejunum should be turned upon itself, thus forming a loop in the afferent limb. A frequent result was that a kink was again formed with the consequent dilatation of the proximal gut and the reappearance of "vicious circle" vomiting. Various modifications were tried, the loop being attached more and more widely to the stomach, but all with much the same result. It was not until the Mayos of Rochester, U.S.A., demonstrated that isotonic peristalsis was not necessary that the present "no loop" posterior operation was perfected and "vicious circle" vomiting became a thing of the past.

The results of this, the "modern" operation, are all that could be desired. Pain and vomiting cease from the time of operation, the patient rapidly regains the power of taking the requisite amount of food and of digesting it, digestion now apparently taking place in the intestine, and consequently weight and strength are with fair rapidity restored. It is, however, of importance to note that in those in which the precedent pyloric obstruction has produced an appreciable loss of tone and motility in the gastric walls the full extent of the benefit to be derived from the operation may not be seen for some months. The case already mentioned of bilocular stomach is an instance of this, and I have seen many others in which the same fact has been noted, but in the majority the improvement is immediate and very striking. Here are two reports chosen from a great many:—"I have a constant feeling of thankfulness to be so healthy and strong. It is worth anything to be restored to good health. There has been nothing whatever to report in my condition that is unfavourable; I have not once been sick, however slightly, but am certainly stouter, and my appetite keeps always normal." This was the case of a man who almost died from hæmatemesis a few months before operation. "I must tell you that I am in the very best of health. I have not since the operation had *any* return of vomiting; the pains that I had previous to the operation have completely gone, and I am glad to say that all food agrees with me. I have been back at my work as a school teacher for three years without having a day's break through illness of any description. Previous to the operation I had been away from school six months, being unable to take any food. I am sure I cannot give you any better satisfaction than to tell you that I have since studied for and passed my final examination as a certificated teacher without any effect on my general health." But this patient had to wait three months before any marked improvement in her general condition was observable.

Behaviour of the New Stoma.

Finally, it has been a source of great interest to watch by means of the radiographic screen the behaviour of the new stoma as time goes on in those cases where it remains permanent. At first the food passes through at once. It is difficult to obtain such observations earlier than the eighth day, the patient not being in a fit condition to bear the exposure, but tracings show that at this time the food does not remain in the stomach any appreciable time but passes at once into the jejunum. Three months after,

whilst some passes at once, as soon as the intestine has received a certain quantity, presumably as much as it can at the time digest, the stoma closes temporarily and no more is allowed to enter; a clear space becomes visible between the food retained in the stomach and that in the jejunum. In a little while the stoma again opens and more escapes. This was at one time believed to indicate the formation of a new sphincter around the artificial opening, but is now believed to be due to reflex contraction of the muscular fibre of the gastric wall in response to stimuli received from the loaded jejunum.

There are, of course, many more points of interest in connexion with these operations and their results, but time will not permit of further enlargement upon them. Sufficient has perhaps been said to show the importance of the subject, the satisfactory results obtainable, and the necessity for ready—and early—diagnosis of the conditions remediable by them.

WILL NATIONAL HEALTH INSURANCE ENSURE NATIONAL HEALTH?

BY ERNEST J. SCHUSTER, LL.D.

(A) *Introduction.*

THE declared object of the National Insurance Bill is not merely the furnishing of help, making it possible for persons disabled by disease to take the necessary steps for the removal of such disease and to tide over the time during which their earnings are suspended, but also to bring about a general improvement in the hygienic conditions of the country. National health insurance is in this way intended, in a certain measure, to ensure national health. I propose in this paper to deal exclusively with this aspect of the Government scheme. The Bill proposes to improve the health of the country: (1) by measures regulating the general conditions of public health; and (2) by measures affecting the insured persons individually.

(B) *Proposals Intended to affect the General Hygienic Conditions of the Country.*

1. *Summary.*—Among the proposals intended to affect the general conditions the following require special mention: (*a*) the power conferred on the Insurance Commissioners to apply certain funds "for the purposes of research"; (*b*) the power conferred by Section 17 on any approved society or local health committee to grant subscriptions and donations for certain purposes concerning public health; (*c*) the rules contained in Section 44 (1) which make it the duty of each local health committee to inquire as to the special hygienic needs of the locality placed into its charge; (*d*) the rules contained in Section 46 as to the holding of inquiries in the event of there being excessive sickness in any locality; (*e*) the reference contained in Section 47 to the Exchequer grant for the construction of sanatoriums; (*f*) the inclusion among the "additional benefits" enumerated in the second part of the Fourth Schedule, under which additional benefits granted under the rules contained in the Bill may include "the building or leasing of premises suitable for convalescent homes and the maintenance of such homes." I have mentioned these various rules in the order in which they appear in the Bill, and will now try to analyse them in a more connected manner.

2. *Proposals as to sanatoriums fund.*—The million and a half of money which is to be applied in respect of sanatoriums has in reality no connexion whatever with the proposed scheme of insurance. The section dealing with it simply says that if Parliament grants a sum of money for the purpose in question the Local Government Board, with the sanction of the Treasury, may apply the fund so granted in any manner that may seem expedient; certain powers are conferred on such county councils as may receive any part of the fund; and the Local Government Board is authorised to form joint committees or joint boards for the purpose of facilitating coöperation between several county councils; but this is all the Bill contains on the subject.[1] The local health committees to be created under the Bill have nothing to do with the administration of this fund, and there is no provision in the Bill relating to the destination of the sanatoriums constructed at the expense of the fund, except that they are to be used for the treatment of tuberculosis or such other diseases as the Local Government Board, with the approval of the Treasury, may appoint.

The Bill does not give a right to any particular class of persons, whether insured under the Bill or not, to be received in any such sanatorium, nor is it clear from its terms whether the county council or other authority by whom a sanatorium is constructed will also be entrusted with the duty to manage and maintain it. It seems that all these matters are entirely left to the discretion of the Local Government Board, and under these circumstances it is quite impossible to say whether the large sum which is to be taken out of the public funds will be spent in a manner ensuring the kind of accommodation and management which can be of use in the fight against tuberculosis. There is no magic in the word "sanatorium." Not every building called by that name is a fit place for the reception of consumptives, and, moreover, the treatment of the patients is as important as the construction and the site of the building. It is important that on all these matters the authorities to whom the management of the funds is entrusted should have the most competent advice, and that they should not be tied down to any preconceived notion in favour of any particular method; but nothing has been done to ensure these objects.

The provisions of the Bill do not enable any authority to compel the patients to submit to sanatorium treatment. In Germany the experience on this subject has not been entirely satisfactory. In a circular letter issued by the Imperial Insurance Office on April 17th, 1909 (A.N. 1909, pp. 487, 488), it is stated that tuberculous patients are frequently disinclined to seek admittance in a sanatorium, and that the patients who seek admittance very frequently leave the institution after a very short sojourn, as they are frightened by the symptoms of their fellow-patients and by the cases of death occurring among them. If sanatorium treatment is confined to the treatment of the early stages of the disease, and to curable cases, such experiences may possibly be avoided; but these are matters requiring a great deal of care and discrimination, and it is by no means certain that the authorities entrusted with the management of the sanatorium funds are likely to exercise such care and discrimination to the desired extent. In Germany the institutions by which the insurance against invalidity is administered, though applying the sanatorium treatment as much as possible, have begun to think of other methods to be used in the struggle against consumption. They have begun to support the voluntary dispensaries which provide for the prevention of infection or which assist treatment in the early stages of the disease, and may supply the medical examination of the relatives of patients. Moreover, they use part of their funds in loans for the erection of healthy dwellings for workmen, and for other purposes preventing the spread of disease. The fact that there are 41 such institutions, each of which has a considerable amount of freedom in respect of the disposal and investment of its funds, is much more favourable to the adoption of discriminating methods than the excessive centralisation which characterises the British scheme.

3. *Proposal as to convalescent homes.*—The building or leasing of premises suitable for convalescent homes and the maintenance of such homes is mentioned as one of the additional benefits to which members of societies who have come under a scheme providing for additional benefits may become entitled pursuant to Section 8 (1) (*f*). A right to such additional benefits may arise in any case in which a friendly society applies its accumulated funds in a manner sanctioned by the Commissioners in accordance with Section 55, or in the case of any actuarial surplus being found to exist on the triennial valuation of the assets and liabilities of any approved society. As there are numerous other "additional benefits" which may be provided by any such scheme, and most of them are of more direct and immediate benefit to the individual members, it is highly improbable that the power to use funds for the object in question will ever be exercised; if it were to be exercised there would be a little more scope for originality and variety than in the case of the application of the sanatorium fund, were it not for the necessity of the Commissioners' approval, which in all probability would

[1] The proposal as to the grant for the erection of sanatoriums is quite unconnected with the provision of the "sanatorium benefit" referred to later.

be made dependent on the observation of a cut-and-dried set of rules. In this connexion it may be remarked that the Bill does not confer any right to convalescent treatment or any power to apply funds for such treatment (except that by way of additional benefit allowances of money may during convalescence be made to members). The German sickness insurance law enables any of the autonomous sick funds to pass rules entitling any insured person to be received in a convalescent home for any period not exceeding a year after the termination of his illness (Section 21 [3a] of the statute at present in force, Section 202 of the new law).

4. *Proposal as to support of hospitals and district nurses.*—An approved society may, under the provisions of the Bill, become entitled to certain windfalls, which are to be applied in such manner "as may be prescribed." These windfalls include: (*a*) the contributions paid by employers for persons remaining uninsured on the ground of irregularity of employment or of their becoming employed after attaining the age of 65 (Section 4 [5]); (*b*) the contributions forfeited on the ground of non-payment of arrears (Section 10 [1]). Out of the funds so provided an approved society or local health committee may grant subscriptions or donations to hospitals or other charitable institutions, or for the support of district nurses, and also appoint nurses for the purpose of visiting and nursing insured persons (Section 17 as amended in Committee). Here, again, we have provisions which may be applied usefully, but the prospect of this being done is somewhat remote, as the accrual of funds in the manner described depends greatly on accidental circumstances, and as, moreover, it is very doubtful to what extent the approved societies and health committees will make use of the power thus given to them. It is a great pity that the Bill does not provide in a more definite manner for the support of hospitals and district nurses. The public will, rightly or wrongly, conclude that provision for sickness has to a large extent been taken over by the State, and it will probably take a long time before it will be realised how very imperfectly this has been done. In the meantime, a large part of the flow of charitable funds from private sources will be interrupted.

Another matter connected with hospitals and nursing also requires notice. The hospitals in Germany receive a great deal of support as a consequence of the rules which enable a sick fund to compel a member in certain specified events to substitute treatment in a hospital for medical benefit and sick pay (see Sickness Insurance Law at present in force, Sections 7. 20; New Law, Section 199), and which enabled the invalidity insurance institutions to apply hospital treatment in the case of patients likely to come under their charge (Present Invalidity Insurance Law, Section 18; New Law, sections 1253. 1254). The expenditure for these purposes during the year 1909 amounted as regards the sick funds to over £2,000,000 and as regards the invalidity insurance institutions to over £1 000,000. There is no provision in the British Insurance Bill other than the very limited authorisation contained in the amended Section 12 (2) (*c*) empowering an approved society to substitute hospital treatment for the other benefits, or enabling them to place patients under treatment for the sake of helping them to escape permanent invalidity. This removes a valuable method by which on one side the general health might be improved, whilst on the other hand a good source of income would be secured to the hospitals.

5. *Commissioners' research fund.*—Under Section 15 (2) each local health committee is to receive a Treasury grant amounting to 1*d.* in respect of each insured person residing in the area of such health committee for the purposes of being applied towards the administration of the sanatorium benefit, but the Commissioners are entitled to intercept such part of the aggregate sum payable in this manner to the health committees as they wish to retain "for purposes of research." Here, as in other cases, a most undesirable uncertainty is created. The Commissioners will either have to curtail the amount applicable for sanatorium benefit, the sufficiency of which is in any case uncertain, or their power to use part of the Treasury grant for purposes of research will be entirely nugatory. Assuming that they exercise the power, the vagueness of the expression "purposes of research" will put them into a most unenviable position, as they will be inundated with proposals for the testing of innumerable inventions or theories.

6 *Health committees' powers of investigation and instruction.*—The local health committees, in addition to their duties as regards the administration of the sanatorium and medical benefits in respect of all insured persons and the administration of all benefits in respect of the deposit contributors, have a number of general duties, partly in competition with the existing local authorities. One of these duties consists in a general consideration of the needs of their respective areas with regard to "all questions of public health." As in the case of the above-mentioned "purposes of research," the indefinite nature of this expression allows our imagination to wander over a wide field, but before speculating on the questions, which may be suggested as fit subjects of investigation, we are bound to think of the more practical problem as to the method of raising the funds which would be necessary if any such inquiry is to be efficient; for without the assistance of experts an aimless wandering over the field of public hygiene will be useless, and it is hardly likely that experts will be found who will supply their knowledge without remuneration. The only funds available for the "general purposes" of the health committees are those derived from the sick pay of inmates of hospitals and sanatoriums who have no dependents and on behalf of whom no payment is made to the institution of which they are inmates (see Section 12 [2]), but these will probably not go very far. The medical officer of health for the particular area may, if he feels disposed and if he is requested to do so, attend the meeting of the committee and give his advice, but he will as a general rule not be able to spare much time for this purpose, and his unaided advice will in most cases be hardly sufficient. The health committee is also to make provision for the giving of lectures and the publication of information on questions relating to health; but here again we ask: How are the funds to be provided? And another question occurs: Will the health committees be so constituted as to make them proper agencies for the collection and distribution of scientific knowledge? Each of these committees is to consist—(*a*) of elected members being as to one-third representatives of the county council or borough council, as to another third representatives of the members of approved societies, and as to the last third of representatives of deposit contributors; and (*b*) of members appointed by the Commissioners, the number of which must, however, not exceed one fourth of the elected members. The elected members, many of whom will be necessarily persons of inferior education, will therefore form the majority. If the sole duties of these committees were connected with the administration of benefits their constitution could not be objected to, but as authorities on the subject of hygiene these bodies will not meet with sufficient confidence on the part of the general public.

7. *Inquiries in cases of excessive sickness.*—The power given by Section 46 to any approved society and to any health committee to bring about an inquiry in cases of excessive sickness due to the conditions or nature of employment, or to bad housing, or insanitary conditions, or to defective or contaminated water-supply, or to the disregard of any provisions contained in any Factory Act or Public Health Act is important, and may have satisfactory results, as there seems to be no doubt that at the present time the authorities who are entrusted with the superintendence of the matters in question are not sufficiently watchful. An inquiry instituted under the Bill may result in an order compelling the employer or the authority whose neglect has caused the excessive sickness to compensate the society or committee injured by such neglect for the additional outlay. It is obvious that the power to institute such inquiries will have to be exercised with caution, more particularly where a private employer is charged with neglect, but there is no reason to assume that the authorities with whom the decision will rest will be wanting in such caution. In any case the clause of the Bill dealing with this matter deals with a definite matter in a definite manner, while the other provisions connected with the regulation of public health to which I have referred have been shown to be of so uncertain a character that it is impossible to make any forecast as regards the effect which they are likely to have.

(C) *Provisions Relating to the Insured Individuals.*

1. *Administration of sickness benefit.*—If by any general scheme of compulsory insurance a state of things could be brought about under which efficient medical treatment could

be secured in all cases in which any person belonging to the poorer classes is in want of such treatment, one would be inclined to overlook many of the disadvantages attaching to the other parts of such a scheme, inasmuch as the benefit to the race which would follow would be so important as to make one inclined to pay almost any price for such a result. It is from this point of view that the question as to the position of the medical profession in its relation to the insurance becomes interesting to every member of the general community. The question whether or not the masses of the population are likely to receive efficient medical treatment under the State Insurance Scheme does not merely concern the medical profession, it concerns everyone who values the progress and well-being of his country. But efficient medical treatment cannot be secured unless a position be given to medical men making it reasonably certain that long years and large sums of money expended for the purpose of acquiring knowledge and experience and obtaining the use of a skilled eye and a skilled hand will not be spent in vain, that the "*res angusta domi*" will not unduly hamper the mental freedom, that the individual practitioner will not be so overtaxed by the number of cases coming under his care that he has to do scamped work and retains neither time nor mental energy for following the progress of medical science. Efficient medical treatment is not secured if the man who trims his sails to the wind, the man who wins his post by sacrificing his intellectual independence, the man who regulates his conduct by the requirements of those who have a voice in his selection—if, in short, the man of inferior moral character has a better chance of employment than one who follows his course without fear or favour. The German experiences have, I think, shown that any scheme under which the selection of medical men depends on popularly elected bodies is likely to favour the inferior man, but I must confess that the system of free choice of doctors (which has been adopted in the amended Section 14 (2)) seems to me as objectionable as the contract system. The system of free choice like the contract system gives the best chance to the worst man. The same type of man who, under the contract system, would have curried favour with the contracting committees will under the system of free choice curry favour with his patients, and as the whole claim to benefits under the insurance will depend on the medical certificate, it is not difficult to see how such favour will be obtained. If the medical benefit were to be restricted to persons whose total income does not exceed £100 the evils of either system would be reduced, because in that case there would be so much scope left for practice outside of the insurance scheme that employment under the scheme would cease to be an urgent necessity, but, even so, the position would in my opinion be unsatisfactory. If the insurance against temporary sickness is retained at all, the better way would be to dispense with the medical benefit altogether and to increase the sick pay, but so that the society or the committee administering the relief shall have power to refuse the sick pay if the patient is not under proper medical treatment, power being also given to require the patient to receive treatment and maintenance in a hospital in lieu of sick pay.

In connexion with the same question it must also be borne in mind that, as the Bill stands, large classes of the population are without the medical benefit, more particularly all children, all married women who are not in the regular service of an employer, all deposit contributors who have exhausted their deposit, all workers who work for their own account or for occasional employers, and are unable or unwilling to come under the unsatisfactory conditions of voluntary insurance, all insured persons who, through unemployment or other causes, have been unable to keep up their contributions during 26 weeks in each year of insurance, and all persons who have no regular employer, and cannot be admitted to an approved society. Some of these excluded classes live under the worst conditions, and the fact that their medical treatment is not secured would alone seriously interfere with the effect produced on the public health by the more efficient medical care to be received by the insured persons. I do not say that any scheme can be devised by which such efficient care could be secured for the whole population, but it is necessary to call attention to the marked insufficiency in this respect of the Government scheme, so as to show that voluntary effort will be required as much as ever. To help in the furtherance and organisation of such voluntary effort, under the guidance of those who are marked out as trustworthy leaders in the fight against disease, is the duty of every public-spirited man or woman.

2. *Sanatorium benefit.*—I have referred to the proposed grant for the erection of sanatoriums among the proposed measures regulating the general conditions of public health. As I am now dealing with the measures affecting the insured persons individually, I must say a word about the "sanatorium benefit" which is to be administered by the health committees. As I have already pointed out, the sufficiency of the fund allowed for this benefit is uncertain. When the sum coming out of the insurance funds (1*s.* 3*d.* for each person residing in the particular area) and the Government grant (one penny for each such person, less such amount as may be retained "for purposes of research") have been exhausted in any year, no farther sanatorium benefit can be provided. In so far as the fund is sufficient, the local health committee may make arrangements for placing an insured person in a sanatorium if they consider his case as suitable for sanatorium treatment (see Section 15). There is nothing to compel an insured person to accept sanatorium treatment if he is disinclined to submit to it, and inasmuch as an inmate of a sanatorium who has no dependents is (by virtue of Section 12 [1, 2]) deprived of sick pay, such a patient may well prefer sick pay to sanatorium treatment.

There remains the further question as to the nature of the sanatorium treatment to be applied. As I have said before, there is no magic in the word "sanatorium," and there are now many institutions called "sanatoriums" who do not supply the proper treatment required for the cure or alleviation of tuberculosis. As I need not explain to this audience, the patients suffering from tuberculosis belong to various classes, for each of which another kind of treatment is required. Is there any guarantee that the appropriate private treatment will be supplied? Is there a guarantee in cases in which, owing to the limited amount of the funds, a selection has to be made, that the most suitable cases will be selected? Having regard to the composition of the health committees to which I have already referred, the answer to these questions is very doubtful. Here, again, voluntary effort must step in to call attention to suitable cases, to supplement the funds in case they are deficient, to criticise the administration where it is faulty, to enlighten the population as to the precautions to be taken and as to the advantage of submitting to treatment when it is wanted and obtainable in a suitable form. Unless such voluntary effort assists the State scheme, the State scheme will be worse than useless. Such voluntary effort will also, as regards sanatorium benefit, be required for the assistance of the numerous classes excluded from the insurance to which I have alluded with reference to the medical benefit.

(D) *Concluding Observations.*

I think I have shown that both as regards the measures affecting the general health and those affecting the insured persons individually the provisions of the Bill are insufficient to secure the fulfilment of the far-reaching hopes which have been held out by its author and its more enthusiastic supporters, and above all that the voluntary agencies which have hitherto been active in the fight against disease will be as necessary as they were before. It would be a disastrous result of the legislation for compulsory insurance if the efforts of these voluntary agencies were to be relaxed, or if they did not continue to receive the unstinted support of the public.

"FIRST AID" ON THE ROAD.—Although scarcely three months have elapsed since "first aid" outfits were issued to the patrols of the Automobile Association and Motor Union and the men were required to qualify for "first aid" certificates, nearly 100 cases have already been reported by the patrols of services rendered to all classes of road users. Twelve cases of injuries by motor-cars were dealt with and over 40 cases of injuries to cyclists and motor cyclists. At Thornhaugh, on the Great North Road, recently a patrol went down a well to rescue a child who had fallen in. Although overcome by the foul gases he eventually recovered the child's body. The patrols have also relieved sufferers from wasp stings, machinery accidents, gun and gunpowder explosions, and a patrol who witnessed the fall of an aeroplane near the Coventry road was able to render prompt assistance to the injured aviator.

LYMPHATISM OCCURRING IN THE EAST.

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I SUPPOSE that it is now generally accepted that the persistence and growth of the thymus gland beyond the three-year limit, together with an undue development of the lymphatic tissue of other parts of the body, are signs that the owner thereof is so constituted that he or she is more than ordinarily liable to sudden death upon only very slight provocation. Hitherto it has been chiefly in connexion with deaths under anæsthetics that serious attention has been paid to the condition of the thymus and lymphoid tissue as of importance in deciding the cause of death, but if the danger of taking an exaggerated view of this undecided factor lymphatism is to be avoided, it is clearly of importance that some wider notice of its occurrence in deaths from other causes should be recorded. The fact that we did occasionally meet with the state among natives of Eastern countries was first brought to our notice by a case in August last year, and since then we have paid particular attention to the lymphatic development in the subjects who have been examined in the post-mortem rooms here.

Our observations extend from May 4th, 1910, to March 5th, 1911. During these ten months 585 bodies have passed through our hands; 20 of these have been so decomposed that a proper examination has been impossible, so that our observations must be taken as applying to 565 examinations.

CASE 1.—The first case which came to our notice and drew our attention to the condition as existing among the native community of the East was that of a Mahomedan girl, aged 3 years, whose body was brought by the police, having been recovered from a tank in the compound of a mosque. The history given by the relatives was to the effect that the child had been playing upon the edge of the tank and had been seen to fall in, the body being recovered about one hour later. There was no reason to doubt the correctness of this history. A post-mortem examination was held about five hours after the recovery of the body. The child was a well-developed rather stout little girl; decomposition was beginning; there was a little frothy mucus about the nostrils, but not more than is frequently seen in bodies which are commencing to decompose, nor was the mucus of that peculiar fine type so characteristic of death by drowning. None of the other external signs of drowning were present. In the internal organs no evidence of drowning could be found; the lungs were dry, and there was no water in either pleural cavities or stomach. The absence of all reliable evidence in the body of the known cause of death perplexed us not a little, and it was not until the examination of the intestine was taking place that any thought of lymphatism was entertained. Upon examining the small intestine the peculiarly prominent, raised, and corrugated appearance of Peyer's patches at once attracted attention, and upon re-examining the abdominal cavity the mesenteric glands were found to be all markedly enlarged, but discrete, and in no way suggestive of tubercular infection; it was then that the idea of lymphatism was first considered. As soon as looked for, there was no difficulty in finding the thymus; its weight when dissected out was 21 grammes. The inguinal, axillary, and cervical glands were moderately enlarged, and were discrete and of a pale pink colour; they were easily palpable through the skin. The tonsils were of fair size, but were not particularly enlarged, but the lymphoid tissue at the back of the tongue was very prominent. The organs of the body appeared to be in a healthy state, and there were no bruises about the head or other part of the body to suggest that in the act of falling the child had sustained injury such as to render her unconscious before immersion in the water.

This case has been dwelt on in detail because it was the first time that our attention was attracted to the condition of lymphatism as likely to be met with out here, and also in order that it may be understood that in this case, at any rate, too nice a care in observation was not responsible for the diagnosis. At this time our knowledge of such a condition was, practically speaking, restricted to the conception of its existence as an aid to anæsthetists in distress, for we had not then had the opportunity of reading the debate upon the subject which took place in May at the Royal Society of Medicine. After the experience of this case we have been taking particular note of the undue persistence of the thymus gland, and of any extraordinary development of the lymphatic tissue of the subjects of examinations, and have met with well-marked signs of lymphatism in 15 further cases. The cases are as follows:—

CASE 2.—A well-built, well-nourished Hindu male, aged 17 years. The supposed cause of death was drowning, but the history was unreliable. No obvious cause of death discovered; signs of drowning absent.

CASE 3.—A Zerbaddi woman, aged 25 years and well developed. The cause of death was hæmorrhage and shock from 18 large incised wounds, more than one of which would have been sufficient to cause death.

CASE 4.—A Chinese male, aged 19 years, a moderately well-developed youth. Death was supposed to have been caused by a fall from a tree from a height of about 20 feet, and the history was quite reliable, as there were several eye-witnesses of the accident. At the post-mortem examination no external injury was detected, and internally the only sign of injury was a shallow tear in the right lobe of the liver. There was no intra-abdominal hæmorrhage, and no obvious cause of death could be discovered; according to the bystanders this had been instantaneous.

CASE 5.—A well-nourished Zerbaddi male, aged 18 years; body picked up at the railway station. No history of illness or accident procurable. At the post-mortem examination the only sign of disease was a small patch of hæmorrhagic inflammatory consolidation at the upper part of the left lower lobe of the lung. In appearance this was suggestive of an infection with the bacillus pestis, but only pneumococci were discovered.

CASE 6.—A well-developed, well-nourished Chinese male, aged 30 years. The supposed cause of death was drowning, and the history was apparently reliable. Post-mortem examination did not disclose any of the usual signs of death by drowning.

CASE 7.—A well-developed muscular Burman male, aged 30 years. He had been found dead in his house; no history of any illness. At the post-mortem examination the organs of the body were found to be healthy; the stomach was full of a very large rice meal, and particles of rice were found in the larynx and trachea, so that the probable cause of death was returned as choking.

CASE 8.—A Burmese boy, aged 9 years. Cause of death, drowning; history quite reliable. At the post-mortem examination the only external sign of drowning was a little fine frothy mucus about the mouth and nostrils. Internally the only sign was some coarse froth in the large air-passages; the finer bronchi and the larynx and trachea were free from frothy mucus, and the lungs were dry and in no way suggestive of death from drowning.

CASE 9.—A Hindu woman, aged about 20 years, well developed and healthy-looking, who had been found in a tank, and as to whose death no history was to be obtained. Post-mortem findings: Decomposition not yet present to any marked extent; the only sign of drowning was a little fine frothy mucus about the nostrils and in the larynx and trachea; the lungs were free from fluid, and there was no water in the stomach. The organs of the body were healthy.

CASE 10.—A Burman male, aged 24 years. The supposed cause of death was suicide by poison. A tumbler containing a large quantity of crude cyanide of potassium was found by the side of the body, and from the viscera the chemical examiner recovered several grains of that poison.

CASE 11.—A native of India, a child aged 13 years, a well-grown boy. He had been playing outside a cocaine den and had picked up a small phial containing some of the drug, and it was supposed that he had taken a small quantity of the poison, as shortly afterwards he developed fits. He was brought at once to hospital but died upon admission. When first seen after admission his temperature was 103°F. and he died almost immediately afterwards. Post mortem no disease was found, but the chemical examiner found 1·1 grains of cocaine in the viscera.

CASE 12.—An Eurasian man, aged 22 years, brought to hospital dead from the effects of a stab wound of the chest. A very well-developed, athletic man. Post mortem the right coronary artery was found to be cut almost in two. The other organs of the body were healthy.

CASE 13.—A Hindu male, aged 25 years, admitted to hospital suffering from fever of two days' duration. He died shortly after admission. The body was well nourished. Post-mortem examination disclosed a patch of inflammatory consolidation in the lower lobe of the left lung: this was very hæmorrhagic in appearance, giving rise, as in the previous case, to a suspicion of plague, but only pneumococci were discovered upon microscopical examination. The other organs of the body were all healthy.

CASE 14.—A Hindu boy, aged 12 years, admitted to hospital for fits, the onset of which dated from the previous afternoon. He had never had fits before. Upon admission the neck muscles were a little stiff and there were some clonic spasms at short intervals (of which muscles the notes do not mention). There was no wound and no history of injury of any kind. A tentative diagnosis of tetanus was made. The boy died that night. The post-mortem examination failed to disclose any cause of death, although the kidneys showed some changes upon microscopical examination.

CASE 15.—A Hindu male, aged 16 years, brought to hospital with an extremely severe wound on the head caused by a fall while at work at the wharf. The frontal bone was badly crushed and brain-matter was escaping from the wound. He died soon after admission. Post mortem all the organs of the body were healthy.

CASE 16.—A Burman male, aged 24 years, brought to hospital dead, the supposed cause of death being cocaine poisoning, but the only evidence in favour of this hypothesis was the facts that he was known to be a cocaine eater and that he had died suddenly. The post-mortem examination showed severe aortitis, with marked narrowing of the orifices of the coronary arteries, such a condition as is not uncommonly the cause of sudden death.

In an analysis of these 16 cases it will, I think, be granted that in all of them—except, perhaps, Case 3—a condition which might without exaggeration be called lymphatism or status lymphaticus was present—that is to say, a state which has been accepted in many recorded cases as a cause of, or, at any rate, an important contributing factor in causing, sudden unexpected death, a factor which is still being energetically discussed in connexion with the occurrence of death under anæsthesia, yet in five, and probably in six, of the cases quoted above the deaths were due to causes other than any peculiar dyscrasia of which the persistence of the thymus gland and the general hyperplasia of lymph tissue are the outward and visible signs. For Case 3 died as the result of severe and necessarily fatal wounds, Case 10 from potassium cyanide poisoning, Case 11 from cocaine poisoning, Case 12 from a stab wound of the heart, Case 15 from a necessarily fatal head injury, while in Case 16 severe aortic

Evidence of Lymphatism Present in the Cases.

Nature and No. of case.	Thymus gland.	Lymphatic glands.			Lymphatic tissue of the tongue.	Spleen.	Intestinal lymphatic tissue.
		Axillary.	Groin.	Mesenteric.			
	Grammes.						
1, Drowning.	21	Enlarged.	Enlarged.	Markedly enlarged.	Prominent.	Normal.	Peyer's patches and the solitary follicles of the small intestine very hypertrophied.
2, Drowning.	30	Moderately enlarged.	Moderate.	Not obviously abnormal.	Very prominent, and tonsils enlarged.	Normal weight, 5½ oz.	Lymphoid tissue not conspicuously exaggerated.
3, Wounds.	5	Not enlarged.	,,	Not enlarged.	Prominent; tonsils enlarged but not greatly.	Normal.	Lymphoid follicles of the large intestine very conspicuous.
4, Fall.	23	Not obviously enlarged.	Enlarged and shotty.	Enlarged.	Tongue lymphoid tissue conspicuous; tonsils large.	Weight 6 oz.; lymph nodules conspicuous.	Solitary follicles of both large and small intestine hypertrophied.
5, Pneumonia.	25	Not palpable.	Palpable and shotty.	Slightly enlarged.	Not examined.	About four times normal in size, but not particularly lymphoid.	Moderate enlargement of the solitary follicles of the large intestine.
6, Drowning.	17	Palpable and shotty.	,,	No marked enlargement.	Well-marked prominence of the lymphoid tissue.	Slight enlargement (1½ times), otherwise normal.	Well-marked hypertrophy of the lymphoid tissue of the small intestine.
7, Choking.	*	Not enlarged.	,,	,,	,,	Normal.	Solitary follicles of both large and small intestine very prominent, also the stomach wall studded with small lymphoid follicles.
8, Drowning.	42·5	Palpable, discrete, and shotty.	Palpable, discrete, and shotty.	Well-marked enlargement.	Lymphoid nodules at the back of the tongue very prominent; tonsils large and elevated lymph nodules around the larynx.	Weight 3½ oz., lymph tissue marked.	Lymphoid follicles of the large intestine and lower half of the small intestine hypertrophied; also very numerous small lymph follicles throughout the duodenum.
9, ? Drowning	15	,,	,,	Moderately enlarged.	Nodules at the back of the tongue prominent.	Normal.	Lowest foot of the small intestine well-marked enlargement of the lymphatic follicles; also conspicuous, though small, lymph follicles in the stomach.
10, Poison.	23	Discrete and palpable.	Suppurating buboes.	Moderate enlargement.	Lymph nodules at the back of the tongue prominent.	Normal size, but lymphoid tissue increased.	Large and small intestine solitary follicles enlarged. Peyer's patches not hypertrophied.
11, Cocaine poisoning.	41·8	Very slight, not palpable.	Palpable and discrete.	Fairly marked enlargement.	Lymph follicles at the back of the tongue and post-pharyngeal lymph tissue hypertrophied.	Normal size, but lymphoid tissue excessive.	No enlargement of the lymph follicles.
12, Wound.	28	Moderate enlargement, discrete and palpable.	Moderate enlargement.	No marked enlargement.	Tongue not examined.	About 2½ times normal in size; lymphoid tissue not excessive.	No obvious hypertrophy of the lymph tissue.
13, Pneumonia.	21	Moderate enlargement.	Normal.	Normal.	Lymphatic tissue at the back of the tongue prominent.	Very large, about five times normal.	Lymphoid tissue normal.
14, ? Tetanus.	28	Moderately enlarged, but not palpable.	Well-marked enlargement; palpable and discrete.	Slightly enlarged.	Moderate hypertrophy of the follicles at the back of the tongue.	Normal.	Fairly well-marked hypertrophy of the lymphoid tissue, more especially of the solitary follicles.
15, Wounds.	12	Moderately enlarged; palpable.	Slight enlargement; palpable.	No very obvious hypertrophy.	Not noted.	,,	Peyer's patches of the lower portion of the small intestine hypertrophied to a moderate extent.
16, Aortic disease.	37·7	Slight hypertrophy, but not palpable through intact skin.	Well-marked hypertrophy; palpable and discrete.	Normal.	Nodules at the back of the tongue prominent, also post-pharyngeal lymph tissue hypertrophied; tonsils large.	,,	Solitary follicles of the large intestine hypertrophied; no striking enlargement of the lymphoid tissue of the rest of the intestinal tract.

* Weight not recorded; was of moderate size, probably 15–17 grammes.

disease was present, quite sufficient in itself to cause sudden death without an appeal to any peculiarity other than heart disease.

In Case 4 it would seem at first sight unreasonable to attribute the death to any constitutional peculiarity, but it is at any rate possible to suppose that his lymphatic state might carry with it an unusual liability to syncopal attacks and so contribute to the occurrence of the accident. We inquired from his relatives whether any proneness to giddiness or fainting had ever been noticed, but could discover no evidence of such having been present. However that may be, it is to be noticed that, so far as post-mortem signs of severe injury were concerned, they were limited to a slight tear in the liver, from which there had been no hæmorrhage, while the man is reported to have been dead when picked up immediately after the fall, so that he died apparently from syncope the result of the shock of the fall, a syncope which was probably aided by his constitutional condition. This would ally the case to Cases 1, 6, and 8; in these cases there was no doubt but that they had been immersed in water during life and that from a practical point of view they had met their deaths as the result of drowning, and yet the usual signs of drowning were either extremely scanty or absent altogether; syncope had apparently taken place almost immediately after immersion. Cases 2 and 9 were probably of a similar nature, although the absence of eye-witnesses of the probable accidents makes their deaths from drowning a surmise of which proof is impossible.

Cases 5 and 13 are of interest as cases of lymphatism which had contracted pneumococcal infection, and considering the facts that they were both well-grown, well-nourished young men, in whom the prognosis of lobar pneumonia ought to be exceptionally favourable, they both died in a most unusually early stage of the disease. In both these cases there were fairly numerous small hæmorrhages beneath the capsule of the thymus gland. In Case 14 it is quite impossible to say that the tentative diagnosis of tetanus was not the correct one, but if so it is certainly most unusual for that disease to follow such an extremely rapid course in the case of a healthy child without any external wound whatsoever. That some serious toxæmic state existed was shown by the condition of the boy's kidneys. Macroscopically the only abnormality to be detected was the presence of some scattered white streaks and spots, but microscopically the cells of the convoluted tubules stained extremely badly, in marked contrast to the rest of the kidney cells; while the white spots and streaks were found to consist of small round cells, such collections as would correspond with what have been described as "lymphorrhages." Whatever may have been the source of the toxin affecting the child, it seems reasonable to suggest that its effects were enhanced by the lymphatic dyscrasia present.

In three of the cases we carefully examined the state of the heart muscle, but in one only did we find any excess of fat, and in this heart the fat lay between the muscle fibres, not within them.

The younger brother of Case 8 was brought to hospital by his father for our examination, and was seen by my assistant, who found all the superficial lymph glands easily palpable, the tonsils were enlarged to a moderate degree, but without a laryngoscopic mirror he was unable to see the state of the lymphoid tissue at the back of the tongue, nor was he able with the means at his disposal to satisfy himself that there was persistence of the thymus.

Although I do not think that this series of 16 cases gives very much information as to the connexion between lymphatism and the liability to the occurrence of sudden death upon slight provocation, or as to the mechanism by which such death is brought about, yet it is, I hope, useful in showing that such a condition is not confined to Western peoples, but is probably as widespread out here in the East as in European countries; that it is not a condition in any way dependent upon race or environment, but exists among all races and in all climes. That this point has not hitherto been made plain is possibly due to the fact that here at any rate the operations for removal of tonsils and adenoids are, practically speaking, unknown, and it is, I believe, the tragic results in several of these minor operations which in European countries have attracted such wide and anxious interest to the occurrence of this condition and to its influence upon the individual's constitution.

Rangoon.

TWO RARE MANIFESTATIONS OF BILHARZIOSIS.

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CASE 1. *Bilharziosis of the spermatic cord simulating tuberculous epididymitis.*—A small Egyptian boy, aged 14 years, was admitted to Kasr-el-Ainy Hospital on May 30th, 1911, complaining of a hard swelling in the right side of his scrotum. He described it as starting, some months before admission, in a small lump above the right testicle, without any pain or other symptom, and gradually increasing in size and length. On examination it was seen that the right side of the scrotum was swollen, but there was no enlargement of the superficial veins or other abnormality externally. A hard, rounded, painless swelling was felt at the back of the testicle, but sharply separated off from it, and a chain of irregular nodules of varying sizes, extending along the cord half-way up to the external ring. The veins of the cord were free and the vas deferens could be felt above the mass quite thin and normal, but below it was entirely lost in the irregular mass. The testis was soft and smaller than its fellow. The skin was not anywhere adherent, and there was no softening of the nodular masses. No nodule could be felt in the prostate per rectum, though the gland was larger than normal. The urine contained no abnormal constituents and was said to be free of bilharzia ova.

Under anæsthesia the whole of the mass, including the testicle, was removed, the appearances both before and at the operation being considered to be tuberculous in nature. The small testis was found to be quite normal, but the whole of the epididymis was replaced by hard yellowish nodular tissue which extended up the cord for some distance. The vas deferens at the site of its section was thin and apparently normal inside and out, but just where it reached the mass were two yellow nodules, apparently typical tubercles. The greater part of the vas could be separated out from the mass, only becoming indissolubly incorporated with it in the lower part.

The peculiar appearances of the vas should have aroused our suspicions against tubercle, but we missed it, and were quite unprepared for Dr. A. R. Furguson's report, which was very short and to the point: "No signs of tuberculosis. The infiltration is bilharzial entirely, the nodular formations present being related to groups of ova as centres."

After recovering from the shock of this report a further investigation was made of the urine and *two* bilharzia ova were found after diligent search through four slides. For the rest, the urine was acid, of specific gravity 1016, and without deposit or other abnormality. Even had these ova been found before operation I do not think it would have altered our diagnosis, as such an occurrence is so common in Egypt at all ages that it might be easily passed without comment. In the face of the pathological examination, however, the discovery of ova became all-significant. The progress of the case was uneventful, and, admitting the mistake in diagnosis, I am convinced the treatment was correct as the testis must have been quite useless from a functional point of view, as there was such a complete replacement of the epididymis, tubes, and vas for the length of nearly two inches at the lower part of the specimen.

CASE 2. *Hæmospermia as the first symptom of bilharziosis.*—It has long been recognised that the vesiculæ seminales may become infiltrated with bilharzial tissue and at quite an early stage of the disease; but I had never, before the following case, met with one in which the presence of the disease in this situation furnished the first evidence of a general bilharzial infection.

The patient was an English soldier, who had been some years in Egypt, and consulted me on Nov. 7th, 1910, as he had recently experienced some blood-stained nocturnal emissions. He was not unnaturally alarmed and consulted a medical man in Khartoum, where he was then stationed, who told him not to worry "as there was no known disease that could produce such an extraordinary symptom and that it would pass off in time." The symptom continued, however, and was still present when I first saw him. I strongly suspected bilharzia as the cause, but before examining him in any way I sent his 24 hours' collection of urine to Dr. C. Todd for microscopical examination. The report came back that "the examination of the centrifugalised deposit revealed the presence of one single bilharzia ovum." The following day I confirmed the diagnosis by examination, and found that the vesiculæ seminales were thickened, especially on the left side, that the prostate was not enlarged, but the posterior wall of the bladder was thickened just above the prostate. Distinct, small, rounded elevations were felt with the sound, and a small papillomatous growth discovered just above the trigone and rather towards the left side.

On careful inquiry the patient admitted that he used to bathe in the Ismailieh canal, a stagnant stream at most times of the year and greatly favoured by natives as a public latrine, and that in October, 1909, he once passed a drop or two of blood after micturition. He also had some dull aching pain in the perineum from time to time. I put him on male fern and the usual *régime*, but there was really very little to treat. The urine was perfectly clear, and contained no albumin or other naked-eye abnormal constituent.

The case is interesting on account of the rarity of the special symptom above noted, and also because of its bearing on matrimony, which was contemplated in the very near future, and an opinion had to be given as to its advisability. After discussing the matter with my friend and colleague, Dr. Ferguson, professor of pathology, and going carefully into the cycle of the life-history from the ovum to the adult

worm, and the generally accepted theory of the mode of infection as propounded by Looss, we came to the conclusion that no risk of infection of the wife was likely to occur, and the marriage took place. The embryos can only hatch out in water and would soon die within their ova in the thick albuminous vaginal secretion.

Cairo.

A CASE OF ECLAMPSIA.

BY G. DE B. TURTLE, M.D. DURH., M.R.C.P. LOND.

THE patient, a married woman, aged 44, was first seen at 3 A.M. on July 9th, 1910 She gave the following history. She had been married five years and had one child, a boy, now nearly four years of age. Since his birth she had had two definite miscarriages and possibly more, the pregnancies being of about two to three months' duration. The previous confinement was normal, except for the facts that the patient's feet and hands had been somewhat œdematous for a few weeks beforehand, and that on the second day of her puerperium she is said to have had a slight fit, but no very definite account could be obtained. Her last period commenced on Oct. 19th, 1909, and lasted five days, so that presumably she would be confined about July 26th. For the last few weeks the patient had had some swelling of her legs, arms, hands, and face, accompanied by severe headaches and dimness of vision. For the last few hours she had experienced great pain in the lumbar region and a blood-stained discharge per vaginam.

On examination the patient was found to be œdematous practically all over, the legs and feet being greatly swollen; by abdominal palpation the child was found to be lying with the head downwards and with the back lying to the left and in front (left occipito-anterior); the fœtal heart sounds were readily heard at a rate of 140 per minute. The vaginal examination was difficult owing to the œdema of the walls; the os uteri was patulous and admitted the tip of the index finger, but it was not possible to reach the presenting part. There were no true labour pains, and the loss by the vagina was only slight. A specimen of the urine was examined. It had a specific gravity of 1015, and on being boiled it became nearly solid with albumin. Some blood was also present, but this was probably of vaginal origin. A portion of the specimen of the urine was centrifugalised and the deposit examined microscopically; it contained renal cells, epithelial casts (both fatty and granular), blood corpuscles, and vaginal and bladder epithelial cells.

During the next 24 hours the patient passed only 13 oz. of urine. An enema had previously been administered with but little result, so active purgation with jalap and scammony was resorted to. The bowels consequently were freely opened. The œdema became less and the patient felt better. The blood pressure was taken with a Martin's modification of Riva-Rocci's sphygmomanometer. It registered 190 mm. Hg. The fœtal heart sounds were 124 per minute. During the next 24 hours 54 oz. of urine were passed, and there was much less albumin present in the specimen. The arterial blood pressure fell to 170 mm. Hg, and the fœtal heart sounds were 132 per minute. During the next 24 hours 75 oz. of urine were passed and the blood pressure was 165 mm. Hg. The amount of albumin decreased to 6 grm. to the litre as estimated by Esbach's albuminometer.

On the morning of July 12th a consultation was held as to the advisability of inducing labour, but as the symptoms were improving so rapidly and the œdema was fast disappearing, and as the fœtal heart sounds were quite regular and easily heard, it was decided to await events. At 4 P.M. on the same day, possibly owing to the excessive purgation, labour commenced naturally; the vertex presented with the occiput pointing to the left and anteriorly. A vaginal examination was made about 8 P.M., and the cervix was found to be dilating well and the labour pains were quite regular. At 9.45 the patient suddenly said that she felt something was coming away from her. On examination a hand was seen to be presenting at the vulva with a loop of the umbilical cord. It was impossible to perform version or replace the hand. Chloroform was administered and forceps immediately applied to the head, which was lying in the vagina. Delivery was easily effected as the head was somewhat small; the child, a male, was born asphyxiated, but the heart was beating very feebly and quite slowly. Direct insufflation was commenced, and after being persisted in for 45 minutes voluntary respirations commenced and continued until 2 A.M., when the child had convulsions. Small inhalations of chloroform were administered, but the fits continued, although at longer intervals. Between the intervals of the fits the child had some nourishment administered, and after the first 12 hours a little improvement was shown. Besides this method of treatment small quantities of potassium bromide in solution were given by the mouth, subcutaneous injections of saline solution (a teaspoonful of sodium chloride to a pint of sterilised water) and oxygen inhalations were all tried, but the child eventually died at 12 noon on July 14th—i.e., 38 hours after birth. No post-mortem examination was made, so that the question as to the origin of the fits, whether they were due to meningeal hæmorrhage or whether they were of toxic origin, must remain in doubt; sufficient to say, however, that they closely resembled eclamptic convulsions in character, commencing with marked lividity and tonic spasm and ending with stertorous breathing.

On the afternoon of July 13th the patient complained of headache and dimness of vision, and at 9 P.M she had an eclamptic convulsion followed by another at 10.30 P.M. A hypodermic injection of morphinæ sulphas, gr. ½, was given, followed by a hot pack, which produced very profuse sweating. The bowels were opened by calomel and magnesium sulphate. As far as could be ascertained about 50 oz. of urine were passed on this day. On the 14th, 120 oz. of urine were passed by the patient in about 12 hours, and on the 15th 84 oz. The blood pressure was still 170 mm. Hg, but the amount of albumin in the urine was considerably less, measuring 4 grm. to the litre. On the 16th there was a small scotoma in the centre of each field of vision (toxic amblyopia). The bowels were being moved, and there was a fairly large quantity of urine passed. The breasts had become swollen and painful, and were full of milk; at her previous confinement they had never shown any signs of activity, but their activity this time was probably due in some measure to the large amount of fluid, especially barley-water, which the patient had been taking by the mouth.

On July 18th, by abdominal palpation the involution of the uterus was found to be progressing normally, and the breasts were less active. An ophthalmoscopic examination was made, but there were no hæmorrhages to be seen in the retina, nor was there any papillitis or cloudiness of the optic disc. The skin during this period was acting very freely, and was doubtless assisting greatly in the elimination of the poison. Good progress was made until July 23rd, when the patient's left leg swelled and became painful; the swelling subsided, however, by the next day. On the 25th the patient still complained of pain in the leg and also "neuralgic pain" in the hip. On the 27th there was pain in the shoulder, and the temperature rose and the pulse became more rapid. These symptoms increased until the 29th, when the temperature was 100·2°, the pulse 130, and the respirations 40 per minute, with rather shallow breathing. No physical signs could be found in the lungs; the albumin in the urine was also increased, being about 2 grm. to the litre. The symptoms then subsided until August 4th, when the patient again had pain in the right side of the chest accompanied by a rise of temperature, increased pulse-rate, and rapid breathing—not so marked an attack, however, as the former. During both of these attacks the patient had been troubled with a short, irritating cough, with little or no expectoration and no hæmoptysis. On August 10th, as there were no cough and no pain and the pulse was 88 and quite regular, the patient was rolled from the bed on to the sofa and remained there some hours, the same proceeding being adopted on the 11th. On the 12th I was called at 5 A M , as the patient was said to be having another attack. According to the nurse's account the patient woke at 5 A.M., having slept very well for some hours. She was extremely dyspnœic, the respirations being very shallow and rapid; great pain was complained of at the back of the neck and in the centre of the chest. The pulse was 90 per minute and regular, but it soon became more rapid, and at 5.30 A.M. was 120; the patient was cold and felt faint and exhausted. When I saw her about this time there was extreme dyspnœa and a constant cough. The pulse was 130 per minute and rather feeble, the skin was cold and clammy, and the face livid; in fact, she looked to be *in extremis*. Ether, m. 20

subcutaneously, was given, and ½ oz. of brandy in 2 oz. of warm milk was administered by the mouth. The patient's colour improved, but the pulse remained feeble, so that at 8.15 A.M. digitalin, gr. 1/100, was administered hypodermically. Throughout the day the patient had frequent inhalations of oxygen, and at 8 P.M. the pulse had dropped to 116 and she felt better. This fortunately proved to be the last of her attacks, for from this time onwards her recovery was uninterrupted.

On August 31st the urine was examined; it had a specific gravity of 1016, was slightly cloudy, and contained a trace of albumin (by Esbach ⅛ grm. to the litre), but no sugar. A portion which was centrifugalised showed bladder and renal epithelial cells and bacillus coli in fair numbers but no casts. In February, 1911, six months later, the urine contained no albumin and the blood pressure was 135 mm. Hg.

This case is of interest in several ways:—1. The rapid improvement in the patient's condition under treatment before labour came on. 2. The fall in blood pressure and the accompanying rise in the output of urine. 3. The nature of the three attacks of dyspnœa which the patient had during the puerperium. 4. The nature of the convulsions which the child had and from which it succumbed.

With regard to the third point, I am of the opinion that the patient had a clot somewhere, possibly commencing in the left femoral vein, as evidenced by the swelling of that leg on July 22nd, and that small emboli were cast off and carried up to the right side of the heart and so into the lung. Why to the right lung only it is difficult to say. There were never any physical signs in the lungs and there was no hæmoptysis. The alternative idea was that these attacks were due to cardiac dilatation, but it will be noted that they commenced with dyspnœa and cough and the pulse became rapid afterwards.

With regard to point 4, I have already mentioned that the possibility of cerebral hæmorrhage could not be excluded, but the way in which the fits came on with tonic spasm, finishing with clonus and stertorous breathing, certainly pointed to their being of toxæmic origin.

In conclusion, I should like to thank my friend Dr. Ernest Playfair, not only for much help at the time of the labour, but also for seeing the case with me from time to time afterwards, and for many valuable suggestions in the treatment.

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THE INFLUENCE OF SALICYLATES AND KINDRED DRUGS ON THYROID ACTIVITY.

BY H. EWAN WALLER, M.R.C.S. ENG., L.R.C.P. LOND.

THIS subject involves of necessity some consideration of thyroid activity in relation to fever. It is a tempting theory that the ordinary symptoms of fever are due, at least in part, to increased thyroid activity, such activity being one of Nature's methods of dealing with toxins which may have obtained access to, or been formed within, the body. Evidence in favour of this supposition has been supplied by Roger and Garnier, who found that in acute infectious diseases with fever there is increased thyroid activity with enlargement of the folliculi, which are filled with a large quantity of colloid substance. Further, we have ample evidence that thyroid exhaustion is commonly manifested by clinical symptoms as a sequela of febrile diseases. Dr. Arnold Lorand has discussed the whole matter in a most interesting article which appeared in THE LANCET of Nov. 9th, 1907, and throughout that article he certainly cannot be accused of underrating thyroid influence. He attributes the rapid pulse, abundant perspiration, polyuria, and diarrhœa all directly to thyroid influence, and quotes experiments to show that the rise of temperature may very well be due to the same cause. The supposition is attended with certain difficulties, and if we accept it we shall be driven to certain other logical conclusions. Throughout we shall take Graves's disease as our standard of excessive thyroid activity.

Now, the process of fever is not a solitary and simple condition, but a complex cycle of events, which tends, however, to follow a fairly definite course. Accepting thyroid activity as the main factor, we shall attempt to interpret events as we go along. Firstly, there is a sensation of lassitude and chilliness, which is probably a signal that toxins have gained access to the system, which has used up all the available thyroid secretion in attempting to neutralise them. And though the thyroid sets to work with all diligence to make more, for a time the secretion is neutralised by the toxins as fast as it can be produced. Thus there is a period of temporary thyroid deficiency in spite of rapid production. The deficiency accounts for the sensation of cold, often amounting to actual shivering, and also for the constipation which is so frequently present. It may also account for the febrile want of appetite, often observable also in patients who suffer from thyroid inadequacy, and possibly even for excessive thirst, which I have likewise often noticed in similar cases, though so far as I am aware the symptom has not been noted elsewhere. One point about the thirst is that cold water is the drink preferred to any other, a fact which may be readily verified by inquiries among half a dozen children suffering from minor degrees of thyroid inadequacy. On the other hand, we must assume that the thyroid activity is in itself the cause of the increased pulse-rate and rise of temperature. The flushed face, the sensation of throbbing carotids and temples, and the consciousness of every heart beat are all familiar features both in Graves's disease and fever. The tremor and sensation of fatigue will be equally witnessed in both conditions. But as yet we have no sweating, which is almost invariable in Graves's disease. In fever this occurs later, and with it the fall of temperature. On the other hand, pyrexia is by no means a constant feature of Graves's disease.

Here are two difficulties which require careful handling, and have possibly proved a stumbling-block to some who might otherwise have accepted this theory before. The difficulty can be got over by the following explanation. A rise of temperature is the immediate effect of big doses of thyroid, whether administered by the mouth or by sudden hyperactivity of the patient's own gland. Pyrexia is also prone to occur when the surgeon unintentionally floods the system with thyroid secretion by manipulation of the gland during operation. But sweating only occurs when the organism finds itself flushed with more thyroid secretion than is required. Thus in Graves's disease, where secretion is in excess all the time, sweating is the rule. Again, during active exercise there is evidence of increased thyroid activity shown by increased pulse-rate and flushed skin, but sweating does not occur till secretion is in excess of demands, the first supplies being presumably taken up by fatigue products. And in fevers, when the production of thyroid secretion exceeds the amount required to neutralise the toxins, sweating occurs, followed by a fall of temperature. The improved condition of the patient is fully in accordance with this view. The fall of temperature is partly regulated by evaporation of sweat, but probably depends still more on reflex inhibition of the thyroid gland, which has now succeeded in the task it set out to perform—namely, neutralising the toxins, producing secretion enough and to spare. The duration and severity of the symptoms will naturally depend on the amount of toxins produced, and the capacity of the thyroid to neutralise them in a longer or shorter time. The dose may, of course, be more than the thyroid can deal with, or hyperpyrexia may result from excessive thyroid activity. Such contingencies do not affect the argument as a whole, and it may be fairly claimed that the position is at least not untenable.

Similarly, it has been argued that salicylates (and presumably other antipyretics) produce their effects by thyroid stimulation. A moderate dose of salicylate of soda in the healthy subject produces (according to Mitchell Bruce) "increased cardiac action, flushing and warmth of the surface with perspiration," and other symptoms which are to some extent peculiar to the drug. So far, this may very well be explained on Dr. Lorand's assumption that salicylate of soda acts by stimulating thyroid activity. And in fevers, when thyroid activity is already high, a dose of salicylate of soda may still further stimulate the gland and so hasten the sweating and general abatement of the symptoms. Whether the proceeding is beneficial or not is quite another matter, and involves the whole question of uses and abuses of antipyretics. The patient feels better with a fall of temperature and a good sweat, but sometimes the temperature rises, again bringing

back all the previous discomfort, and in this case we may well wonder whether we have been premature in our efforts or not. In theory, of course, when the illness is commencing and toxæmia still slight, if by a few doses of salicylates or other antipyretics we can hurl into the circulation enough thyroid secretion to form antitoxins or annihilate the germs by whatever mode is usual, we may then congratulate ourselves on having cut short the attack. Howbeit, our method may have been extravagant, and if we have miscalculated the hidden forces arrayed against us we may have committed a grave strategical error which perhaps would not have been done by Nature unaided.

It is, of course, possible or even probable that salicylates have an action which is hostile to micro-organisms or even poisons of other origin, and that benefit accrues from such action quite apart from thyroid influence. But the point I wish to lay stress on is that salicylates have a powerful influence against thyroid activity. In view of what has just been said this seems a startling statement and therefore requires proof. Whether salicylates powerfully stimulate and so rapidly exhaust thyroid activity, or whether they actually neutralise it, and so in the case of an active gland stimulate further production (like lemon-juice and saliva or alkalies and gastric secretion), I cannot say, but the evidence I am about to bring forward points to the latter conclusion. I will quote three cases.

CASE 1.—A robust adult had an acute tonsillitis. He had stuck to his work for three or four days when I first saw him one morning. He had then taken to his bed with a pulse-rate of 120 and temperature 102° F. He had headache, and aches and pains in the limbs severe enough to suggest rheumatism, but possibly only influenzal. He was given a mixture containing 15-grain doses of sodium salicylate and half-drachm doses of compound tincture of cinchona. But owing to variations in the size of the domestic tablespoon he took repeatedly a larger dose, roughly 20 grains of salicylate and 40 minims of bark every four hours. The error was not discovered for 36 hours. He then had a (morning) pulse-rate of 48 and temperature of 96·4°. He had sweated profusely the first night, and his bowels were obstinately constipated, resisting strong doses of aperient. The pulse and temperature remained at this low level all the next day, and the bowels were still obstinately constipated in spite of aperients, though the salicylate mixture had been left off. Thyroid, 2½ grains twice a day, was then given for two days and the temperature again rose, this time to nearly 101°, and the pulse to 98. The throat progressed rather slowly in spite of energetic antiseptic treatment which had given me excellent results in other cases. The patient returned to work 12 days after I first saw him, when in spite of full doses of strychnine he had a very soft dicrotic pulse of 76 and a blood pressure of only 100 mm. Hg.

I have already mentioned that this patient was usually robust, and may add that ordinarily his bowels were remarkably regular. The low pulse-rate, the dropped temperature, and obstinate constipation all suggest that in this case the thyroid was seriously depressed by the drugs mentioned. The low blood pressure was probably due to the same cause, inasmuch as high blood pressure is a common feature of Graves's disease. There is a widely prevalent idea that thyroid activity lowers blood pressure. It causes flushing of the skin and sweating, so the conclusion is a natural one. Actually, I am certain that it is wrong. Cretins and thyroid deficients have low blood pressure, and repeated observations have shown me that thyroid administration almost invariably raises blood pressure, possibly by simple acceleration and augmentation of the heart beat. Hence the ill effect of large doses of thyroid on a heart with feeble muscle. If this interpretation be correct, it is probable that the heavy doses administered did harm and prolonged convalescence.

CASE 2.—The patient was a woman, aged 39, who had suffered from life-long constipation and manifested the ordinary signs of minor thyroid inadequacy. Her general condition had been enormously improved and constipation much lessened by thyroid medication. On one occasion her bowels had been perfectly regular for over a week without any medicine other than thyroid, and she could not remember that this had ever occurred before. At the time of which I now write she was taking a small dose of cascara nightly, and was somewhat tired owing to disturbed nights entailed by her duties as nurse. She was given aceto-salicylic acid for a slight attack of lumbago, from which she had been suffering for several days, and though the dose did not at any time exceed 10 grains thrice daily, her constipation greatly increased, and the nightly dose of aperient medicine had to be more than doubled while taking this drug. It is only reasonable to suppose that the increased constipation was due to exaggeration of the thyroid depression caused by the aceto-salicylic acid.

CASE 3.—This was a case of Graves's disease. I had previously found aspirin to be of great value in controlling paroxysms of tachycardia, and accordingly prescribed a daily morning dose of 10 grains for this patient, who usually had an attack of palpitation after breakfast. The remedy was perfectly successful, and in view of the cases just quoted I resolved to try the effect of three or four doses daily. The result was rather remarkable and more than justified my expectations. The pulse-rate improved considerably and the patient felt very much better. Her bowels, which had previously been open twice and often three times a day, were now open but once daily. She increased 2 lb. 1 oz. in three days. Though this increase in weight might be attributed to fæcal accumulation it does not affect the argument, inasmuch as the previous intestinal activity was due to excessive thyroid action. The only objectionable feature was some gastric disturbance, which may have been caused by using a less pure substitute for aspirin. Sweating was, if anything, less than previously.

More prolonged experience of this treatment is necessary before one can pronounce final judgment, but I think it proves that aspirin and possibly other salicylates and allied drugs will be found of inestimable value in Graves's disease. One might avoid the gastric disturbance and possibly get still better results by local use of one of the easily absorbed salicylic compounds directly applied to the skin over the thyroid gland. The final result naturally depends on whether thyroid control or exhaustion will cure Graves's disease or otherwise, which is quite another question and cannot now be discussed.

Further, in view of the beneficial results recently obtained by thyroidectomy in inoperable cancer, similar benefit might be obtained by the use of aspirin in such cases, many of which are also unsuitable for thyroidectomy. Aspirin has, of course, been used for the relief of pain in cancer, and this may explain the *modus operandi*.

Birmingham.

MEDIASTINAL CAUSES OF CHRONIC COUGH IN CHILDREN.

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IT happens again and again, especially in towns, that young children suffer from a persistent cough which lasts on and off for weeks or months without being materially relieved by any of the ordinary cough mixtures, lozenges, linctuses, or syrups, and yet without any very obviously abnormal physical signs being discoverable to account for this cough. Not a few such cases are attributed in an indefinite kind of way to adenoids or to tonsils and adenoids, or to mouth-breathing; but there is another cause at work in at any rate one group of these cases—namely, chronic enlargement, sometimes no doubt associated with tuberculous caseation, of the glands at the bifurcation of the trachea. When a large number of post-mortem examinations are made the fact obtrudes itself that the bronchial gland immediately below the right bronchus is affected far more frequently than is the gland upon the left side, and the right phrenic nerve is frequently seen to be displaced by the enlarged lymphatic gland in such a way as probably to be much irritated by it and thus to lead to attacks of purposeless coughing—that is to say, coughing which does not succeed in the bringing up of any sputum. In a certain number of cases it is possible to demonstrate the enlargement of this right bronchial gland by means of the X rays, as the following case demonstrates.

The patient was a healthy-looking, chubby-cheeked girl, 7 years of age, who was brought to the hospital with a history that she had suffered from a bad cough for months without this cough apparently being benefited, except perhaps momentarily, by the administration of any of the usual

remedies. There were no abnormal physical signs to be made out in the chest, but the possibility of there being a caseous bronchial gland was suggested first by the fact that the girl had been in the habit of drinking large quantities of unboiled London milk—a very prolific source of this type of tuberculous infection, I believe—whilst an elder brother had died from tuberculous meningitis, which is also related much more closely to cow's milk infection than to a phthisical family history. On examination of the chest with the X rays the heart and the diaphragm appeared to be normal, the latter moving fairly well on both sides. The lungs themselves were quite clear at their apices, but bulging to the right of the spine in the region of the root of the right lung there was a very obviously abnormal shadow corresponding precisely with an opaque and presumably caseous gland close to the root of the right lung.

It is probable that the attacks of coughing which are so troublesome in some heart cases are to be explained by irritation of the phrenic nerves in a similar way, by their being displaced and stretched by the dilated and hypertrophied heart.

The importance of realising that enlarged bronchial glands may be the cause of persistent coughing in children is that the enlargement is generally tuberculous, and therefore the correct treatment is to adopt the general hygiene best adapted to the relief of a tuberculous infection together with measures calculated to prevent the swallowing of more living tubercle bacilli, an end to be accomplished either by obtaining milk from cows that have been satisfactorily tested with tuberculin, or else by making sure that any tubercle bacilli in the milk have been killed by efficient sterilisation, preferably by thorough boiling.

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"COMFORTER" OTITIS MEDIA.[1]

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MIDDLE-EAR suppuration may occur at all ages from earliest babyhood to extreme old age, but the seed of disease is usually laid down before puberty, and the object of this paper is to express an opinion as to the origin of suppurative otitis media in babies.

If we consider the possible ways of infection of the middle ear we find that these are three. This infection must take place either (1) by way of the external auditory meatus; (2) by the blood stream; or (3) by the Eustachian tube.

1. Now the first of these may be at once eliminated, for infection from this source usually means mischievous endeavours to remove wax or foreign bodies from the meatus, with damage to the membrana tympani, and there would be a clear history.

2. Infection by the blood stream means an associated septicæmia. I believe that such when it occurs usually has the pneumococcus as the infecting organism,[2] and ofttimes there is a history of pneumonia. When such cases occur the patient is usually ill with, or convalescent from, pneumonia, and the middle-ear disease may be associated with other complications, such as empyema, abscess of the skin, arthritis, and even peritonitis. Referring to this type of case, my memory is carried back to the case of a small child who was under the care of one of my medical colleagues at the East London Hospital for Children. This child, after an attack of pneumonia, developed acute otitis media and arthritis of the right shoulder-joint. I opened the shoulder-joint and washed it out, and treated the ear discharge with lotions, and both complications cleared up without further difficulty. At the time of operation films of the pus were made from the joint and the middle ear, and in both a Gram-positive diplococcus, morphologically identical with the pneumococcus, was found.

3. But the point about these babies with middle-ear suppuration, which are brought to an out-patient practice, is that they often appear as fine, healthy-looking infants. Usually if anything is wrong with them it is that they are anæmic. They are free from fever, from signs of other illness, or history of other illness, and, in fact, it is impossible to associate them with a septicæmia, of which the middle-ear disease is a local manifestation. When first I took out-patient work at the East London Hospital for Children the origin of this suppuration perplexed me. As there was no evidence of infection by the meatus, nor yet by the blood, the only conclusion to arrive at was that the infection was by the Eustachian tube, and naturally on the top of this conclusion came the question: How does this infection take place?

Adenoids sufficiently large to be obstructive are uncommon in infants under 18 months, and certainly under 12 months they are rare. They do occur, I believe, but even in the large out-patient practice of a children's hospital such cases are rare, and the class of case to which I am now particularly referring are obviously nose-breathers, have no heaviness of breathing, no chronic nasal discharge, or other sign pointing to adenoids. Between two and three years of age, cases of adenoid enlargement, complicated with middle-ear disease either as chronic suppuration, recurrent suppuration, or pain in the ear or ears, are common; but they are so well recognised by the profession that I need not emphasise that it is not the class to which reference is made here.

The concentration on the subject resulting from seeing a large number of babies suffering from chronic suppuration of the middle ear drew my attention to the constant association of the comforter or dummy and this middle-ear disease; and once this association has been remarked, the correlation can be worked out quite easily, arguing by analogy. In the present day it may be stated as a recognised fact that in older children adenoid growths and middle-ear disease are intimately associated as cause and effect; and we recognise that the association, speaking without any special exactitude, is that the adenoids lead to embarrassment of nasal respiration and some resulting opening of the mouth; that through the opened mouth cold, dry, and unpurified air enters, gradually lowers resistance, and leads to the infection of the oro-pharynx and naso-pharynx, including the adenoid region; and that the adenoid region can at once become a vantage-ground for organisms because of its crypts, its shut-in position, great vascularity, and free secretion. The openings of the Eustachian tubes situated on the side walls of the naso-pharynx are constantly exposed to infection, and we are only too well aware in how large a number of cases the organisms get to the middle ear.

Now it seems to me that the great danger of adenoids is the mouth-breathing, leading to oral and naso-pharyngeal sepsis. This is borne out by the observation that middle-ear disease will ofttimes not clear up, despite the removal of adenoid growths and suitable local treatment, unless nose breathing is established. It seems fair to argue by analogy that a large number of cases of middle-ear suppuration in babies result from oral sepsis introduced, not by mouth-breathing, but by the comforter or dummy. I would here remind my readers that this theorising on the subject came after the observation made in an extensive out-patient practice of a Children's Hospital, and it was this observation which led me in the first place to associate the so-called comforter with this suppuration.

The way in which the comforter acts is by introducing oral sepsis. Usually the comforter is a rubber teat in some sort of bone collar, and fixed on to the baby either by a piece of ribbon, tape, or string, and when not in the baby's mouth touching all sorts of unclean things; and from the fact that the surface is usually moist and sticky from saliva and mucus, particles of all sorts adhere. Then it is a lamentable practice on the part of baby-tenders to give the comforter a preliminary suck before putting it into the baby's mouth, and to anyone who has had any experience of the neglect of the teeth which occurs among the servant class in this country the variety of organisms thereby introduced into the comparatively clean mouth of an infant can be more easily imagined than described.

This, in my opinion, is the crux of the matter. The comforter is at fault only in so far as it introduces sepsis leading to what are probably catarrhal processes, giving very little, if any, signs or symptoms in the mouth, oro-pharynx, and naso-pharynx; but once they spread by the tube to the middle ear the lack of drainage quickly becomes felt and suppuration often results. That catarrh alone may result, with painful distension of the middle ear, is probable from the occurrence

[1] A paper read at a meeting of the Cambridge Medical Society.

[2] Pneumococcal Otitis Media, by the writer (see West London Medico-Chirurgical Journal, April, 1908).

of pain in the ears in some babies who never get discharge coming from the meatus. Even if it gets no further than a painful catarrhal process, however, it is capable of doing considerable damage in a small enclosed space like the middle ear.

It is not my intention to deal with the pathological changes arising from middle-ear suppuration, but reference may be made to the permanent damage which results from destruction of the ciliated epithelium of the Eustachian tube and which may leave an unguarded path for future infection. All otologists will have met with cases of suppuration occurring later in life where the patients have stated that as babies they were said to have had discharging ears; and again, it is of no uncommon occurrence in examining a patient for some catarrhal deafness associated with later years to find healed and even unhealed perforations of the membrana tympani, where the patient never remembers having had suppuration of the middle ear, and where the inference is that it occurred at a very early age.

I have no intention to dogmatise. It is now my firm belief that a large proportion of cases of suppuration of the middle ear in infants is directly due to the comforter, and I am in the habit of labelling them "comforter" otitis media; but I am also very well aware that there are lots of babies who suck comforters but never suffer from ear trouble, and, on the other hand, that there are cases where middle-ear disease occurs although a comforter has never been used. Given a comforter which is cleaned regularly, never allowed to touch anything dirty, and never placed in any mouth but that of the infant, the septic element is eliminated and all may be well. Experience suggests that it is a high standard to maintain, but there is no reason why it should not be maintained if the comforter is held to be necessary. As regards the cases where suppuration occurs without any comforter to point to as the *fons et origo mali*, they will probably be found to be few in number, and the cause may possibly lie in mouth sepsis from other causes, just as occasionally one finds middle-ear suppuration in older children without a trace of adenoid enlargement.

The prognosis of these cases may be said to be good, both from the point of view of cure of the suppuration and maintenance of hearing power. In treatment the aim will be to remove the cause, cleanse the mouth, wash away the discharge from the middle ear and so prevent accumulation and stagnation of pus, and, finally, to provide against any secondary infection by way of the meatus from outside. These guiding principles are carried out in practice by eliminating the comforter or rigidly enforcing its cleanly use, cleaning the mouth with some mild antiseptic preparation such as glycerinum boracis and so preventing further infection by the tube, and treating the existing suppuration by syringing out the middle ear three times a day with some weak antiseptic lotion after instilling a few drops of hydrogen peroxide (10 volumes). Finally, it is a routine of my practice to advise the wearing of some antiseptic wool in the concha, to prevent secondary infection from the outside in between the syringings. This last precaution is especially necessary in babies, because of the risks of getting soapy water into the ears when they are bathed.

Cambridge.

THE TREATMENT OF TORTICOLLIS:

A PLEA FOR A REVISION OF ACCEPTED TREATMENT.

BY PAUL B. ROTH, F.R.C.S. ENG.

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THE observations in the following paper apply to the torticollis which is met with in children, which is usually described as congenital, and which is due to a non-spasmodic shortening of one sterno-mastoid muscle. The aim of the paper is to call attention to the fact that after torticollis has been treated by tenotomy no retentive apparatus is necessary. The four cases described were in-patients at the London Hospital, under the care of Sir Frederic Eve, to whom I am indebted for permission to publish their notes.

It is generally taught in orthopædic works that the treatment for this condition is division of the muscle, followed by use of retentive apparatus. Thus Tubby says: "The principles which should guide us in undertaking operative measures are:— ..... 2. After tenotomy, to maintain the improved position by means of a simple apparatus, and such as does not interfere with daily manipulations."[1] "The head is fixed in plaster in the over-corrected position for 10 to 14 days, and the patient is then sent out with a plaster-of-Paris collar. It is well to divide this anteriorly, and to lace it, so that it may be taken off, and daily movements of active and passive manipulation practised. The collar should be worn for four to six months."[2]

Bradford and Lovett, 1900, say: "The head should be immediately rectified and retained in a corrected position, either by means of a plaster-of-Paris bandage enclosing the head and trunk, or ..... the bed frame described in the treatment of caries of the spine. ..... This can be employed for a week or ten days, and a light retention appliance be used."[3] "This latter should be worn for from three to six months, when permanent cure should be established. Without the use of apparatus after operation relapse is likely to occur."[4]

Royal Whitman, 1907, says: "The head should be fixed during the process of repair in the over-corrected position. ..... In this attitude a plaster bandage should be applied surrounding the head and the thorax. It should remain ..... until the tendency towards deformity has been checked."[5] "Fixation in the over-corrected position is very important in childhood as an aid in overcoming the deformity habit. ..... The plaster bandage is usually retained from four to eight weeks. When it is removed, massage, manipulation, and gymnastic training are indicated."[6]

Stewart, 1908, says: "In the operative treatment two points of importance call for consideration: first, to rectify the distortion by cutting or by manipulation; second, to maintain the head in a suitable position by some form of apparatus."[7] "The very best form of the latter is the plaster helmet. ..... After the wound has healed the helmet may be left on for from four to eight weeks, or even longer."[8] "If, after the splint has been removed, it be found that the deformity be overcome, it will be necessary, in order to prevent its return, to institute systematic exercises, to employ massage, and constantly to take advantage of posture."[9]

Finally, G. A. Wright, 1910, gives an account of the use of elastic traction after tenotomy for torticollis,[10] and obviously regards its use as necessary.

The above quotations would show that after operation the use of retentive apparatus is imperative. I wish to point out that it is superfluous.

It will be noticed that both Whitman and Stewart advocate systematic exercises *after* retentive apparatus has been worn for many months; and that Tubby recommends them *concurrently* with it. I submit that they should be used *from the first*, and without apparatus of any sort whatsoever. It will be seen further that these writers do not state what exercises should be done; there is only a general statement about them. Unfortunately, in the majority of orthopædic works, whenever exercises are mentioned, the same absence of detail is noticeable.

While house-surgeon at the London Hospital in 1909 I operated upon four cases of torticollis. After division of the muscle and fasciæ by the open operation the head was firmly manipulated into an over-corrected position. The child was then put back to bed with the head between sandbags, and on the second or third day was allowed up and gentle passive movements were begun. On the fifth or sixth day active movements took their place, and after removal of the stitches the mother was shown how to superintend the carrying out of these movements at home for five minutes twice a day. These four patients are completely cured. By "cured" is meant that a year after operation the child holds his head perfectly straight, that he can twist his head round to look over one shoulder just as well as over the other, and that only by finding the operation scar can the affected side be discovered.

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[1] Tubby: Deformities. 1896, p. 199.
[2] Ibid., p. 203.
[3] Bradford and Lovett: Orthopædic Surgery, 1900, pp. 588, 589.
[4] Ibid., p. 590.
[5] Royal Whitman: Orthopædic Surgery, 1907, p. 665.
[6] Ibid., p. 656.
[7] Stewart: American Practice of Surgery, 1908, vol. iv., p. 774.
[8] Ibid., p. 779.
[9] Ibid., p. 780.
[10] Wright: Brit. Med. Jour., "Elastic Traction and Pressure in Surgery," Nov. 26th, 1910, p. 1667.

The exercises are as follows, carried out with the patient lying supine on the table:—

1. *Head twisting.*—The head is slowly rotated as far as it will go to the right, then slowly to the front again, then slowly to the left, then slowly to the front, the patient counting audibly 1, 2, 3 during each movement. This is repeated six times.

2. *Head sideways bending.*—The head is laterally flexed slowly to the right, so as to bring the right ear close to the right shoulder, then slowly back to the median position, then slowly to the left, then slowly back again. During this exercise the patient looks up at the ceiling, and the back of the head rests on the table, in contrast to exercise No. 1, when he looks alternately over one shoulder and then over the other. As in the former exercise, the patient counts aloud during each movement, which is repeated six times.

At first these movements are performed passively by the surgeon; but the patient is encouraged to help actively, and by the fourth or fifth day can do them perfectly well by himself. When the child leaves the hospital after the stitches are out, the mother is shown what the exercises are, and is made to carry them out in the presence of the surgeon. It is explained to her why the exercises are ordered, and why she must continually correct the patient if he holds his head crookedly. The patient is not seen again.

It has been objected that the mothers of hospital patients are not sufficiently intelligent to carry out home treatment of their children. It will be found that the stupidity of the mother bears an inverse ratio to the care and patience of the surgeon. The four cases were as follows:—

CASE 1.—A. B., reg. no. 3371, aged 5 years. Difficult labour, instrumental; head presentation. Left torticollis, only noticed one year ago. Operation Sept. 11th, 1909. Left hospital Sept. 17th. Not heard of until April 13th, 1911, when the mother said he held his head perfectly straight, and was just the same in every way as his brother (see Case 3). The exercises were done for three months.

CASE 2.—C. D., reg. no. 3664, aged 4 years. Normal labour. Left torticollis, first noticed when 11 months old. Operation Oct. 7th, 1909. Left hospital Oct. 13th, but came back to have stitches removed. Not seen until April 21st, 1911, when absolutely cured. The exercises were done for one year.

CASE 3.—E. F. (brother of patient in Case 1), reg. no. 3842, aged 11 years. Breech presentation. Left torticollis, noticed when 7 or 8 years old. Face asymmetrical; left eye lower than right. Operation Oct. 19th, 1909. Left hospital Oct. 24th, but came back to have stitches removed. Not seen until April 13th, 1911, when absolutely cured. Face symmetrical. Exercises done for three months.

CASE 4.—G. H., reg. no. 3885, aged 4 years. Difficult labour, instrumental. Right torticollis, noticed when 6 months old, when received by foster mother. Operation Oct. 22nd, 1909. Left hospital Nov. 11th. Not seen until April 13th, 1911, when absolutely cured. Exercises only done one week.

Thus complete cure has been brought about in four cases without the aid of retentive apparatus; that is to say, in these four cases retentive apparatus was needless. Is it not needless in all other cases which come within this scope?

There is nothing new in what I have written: my father in 1884[11] drew attention to the same matter. Yet still the use of retentive apparatus goes on, and each surgeon endeavours to invent some new apparatus when none is wanted.

Harley-street, W.

A CASE OF SUPPURATING INGUINAL OVARIAN HERNIA; OPERATION; RECOVERY.

BY JOHN J. WADDELOW, F.R.C.S. ENG.

THE patient was aged 28, and had been married 11 years; she had had three children. The first confinement took place on July 22nd, 1901, when an impacted occipito-posterior presentation was delivered by perforation and cephalotripsy after ineffectual endeavours by forceps. Her second confinement was on Feb. 12th, 1906, when she was successfully delivered of a living male child by forceps. Her third confinement took place on Oct. 13th, 1910, when a dead child was delivered with great difficulty by high forceps (Neville's axis-traction). About six months after her second confinement she noticed a lump in her right groin, which she thought she had brought on by lifting weights (she had been changing houses). At first the lump would be only down occasionally and always going back at night when she reclined. Sometimes it would come down when she put her feet to the ground. During pregnancy the lump was never in evidence.

There was never any actual pain, only a dull ache, [illegible]ng a feeling of sickness and making walking difficult. Thinking that this was an ordinary rupture, without taking any professional advice, she, after her own fashion, measured herself for a truss, which she sent for to a neighbouring town by the carrier. As might be supposed, this truss did not fulfil the purpose for which it was intended. After her third confinement on Oct. 13th all went well till Oct. 24th when the temperature rose to 103° F. Nothing was found to account for it, and in about a week it gradually subsided without giving rise to any symptoms. After a few days she got up and came downstairs. On the first day after getting up the lump reappeared. On Nov. 15th, after a hearty supper, she went to bed, and about 4 A.M. I was suddenly summoned on account of her waking up in violent pain. On my arrival I found that the pain was in the right iliac fossa; the temperature was 103·4°. I ordered hot fomentations and a liquid diet, fully expecting I had a case of acute appendicitis to deal with; but instead of the usual constipation the bowels became loose, and on Nov. 18th the pain and tenderness were much less and the temperature had fallen to 100°. Then it was that she told the nurse about the lump, who immediately told me.

On examination there was a tender swelling in the right inguinal region a little below the external ring just at the top of the right labium majus. The swelling was irreducible and no impulse could be obtained, but after manipulation it ached considerably. With the decrease in the pain and tenderness in the right iliac fossa the reverse occurred in the groin. The swelling became red and very tender. This was the condition of affairs on Nov. 21st and the temperature had risen from 99° to 100·4°. The bowels were slightly constipated, but there was no vomiting or collapse indicating strangulation. I advised operation.

On the following morning (Nov. 22nd), although she was menstruating profusely, I cut down, making the usual incision for radical cure of inguinal hernia. The skin had become thickened and œdematous, and after proceeding very carefully I came upon a round mass surrounded by a large quantity of organised lymph. In working round this with my fingers the abscess gave way and discharged a quantity of odourless pus. After some patient manipulating I succeeded in separating the mass from its surrounding adhesions and tracing it up to the external abdominal ring, when I put some traction on; the mass proved to be the ovary and the Fallopian tube with the broad ligament. This I drew down and ligatured with silk, and having cut off the ovary I let the stump slip back. I failed to find any trace of a peritoneal sac. I then proceeded to pass a suture through the external pillar of the ring when a sharp gush of venous hæmorrhage occurred. What was actually pricked I could not tell, but my index finger was in the canal and the point of the needle was pressed against it. This gush stopped on pressure, and I refrained from any further attempts at ring suture. The wound was washed out and united with ten interrupted silkworm-gut sutures, and a small drain was inserted at the lowest point.

No pain was experienced after the operation, but on account of the menstruation the dressing had to be changed the next day and again on the following day. On Nov. 24th the temperature was normal and the tube was taken out and a collodion dressing substituted for the bandage. On Nov. 29th three stitches were removed and on Dec. 2nd the rest were removed, the wound having healed by first intention despite the presence of pus at the operation. On Dec. 7th the patient got up for the first time.

Doubtless during pregnancy the fundus of the uterus rising up drew upon the Fallopian tube and brought the ovary away from the neighbourhood of the internal abdominal ring to a higher position in the pelvis, and then on the occurrence of involution it returned to its old position. The interesting points, clinically, were that the condition simulated appendicitis, making it doubtful whether the acute attack of pain was in reality appendicitis. Again, that as the abdominal symptoms waned the inguinal ones waxed.

Hernia of the ovary is usually an infantile condition and associated with a patent canal of Nuck as in a congenital hernia. Hernia of the ovary coming on in adult life by itself and not as a portion of a pre-existing hernia is a rare

[11] Bernard Roth: Brit. Med. Jour., "The Treatment of Non-Spasmodic Wry Neck," June 14th, 1884.

occurrence; as is also the absence of any sac. The case also goes to show how reticent some women are in confiding all their troubles to the medical attendant; and also how some will attempt to diagnose and take the treatment of their condition into their own hands.

Whittlesey.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF RECURRENT ILEO-CÆCAL INTUSSUSCEPTION; OPERATION; RECOVERY.

BY J. D. FIDDES, M.A., B.SC., M.B., CH.B. ABERD.,
LATE RESIDENT MEDICAL OFFICER, ROYAL HOSPITAL FOR SICK CHILDREN, ABERDEEN.

THE patient, a boy, aged 3 years, was admitted to the Royal Hospital for Sick Children, Aberdeen, at 11 A.M. on Feb. 24th, 1911. He had become acutely ill on the same morning at 5 o'clock. The condition on admission was as follows. Temperature 98° F.; pulse 120. The child looked very ill, and every few minutes brought up a green bilious vomit. There were very evident spasms of severe colicky pains coming on every three minutes, during which he cried and drew up his legs. The bowels had moved the day before admission, when the stool was green and foul-smelling. The child was now passing only clear mucus by the rectum. No blood had been seen. The abdomen was soft and easily palpable. The patient was very quiet between the spasms of colic. A distinct sausage-shaped tumour was discovered at the outer edge of the right rectus just below the liver. No abnormality was felt per rectum.

The mother stated that for the last 18 months the child had been troubled with constipation, and had several acute attacks of colicky pains, but that medical advice had not been sought, except on two of these occasions when the pain had been more severe. Dr. Laura S Sandeman had been called in, who kindly informed me that the first of these occasions was about ten months previous to the present attack when the case was diagnosed as one of intussusception, a distinct tumour being felt on the right side of the abdomen. There was at that time vomiting, but no blood was passed by the rectum. The medical attendant arranged immediately for the child to go into hospital, but on returning to see him previous to removal found that all the symptoms had disappeared. The attack lasted 24 hours. The second severe attack was about three months before admission, and was somewhat similar to the first. On this occasion the child again had vomiting of a bilious character, but, in addition, had passed blood per rectum. The attack lasted only from three to four hours. There had been two or three minor attacks between these two severe ones.

On admission the child was at once taken into the operating theatre and Mr. H. M. W. Gray opened the abdominal cavity by a paracentral incision, retracting the right rectus muscle outwards. There was found to be a well-marked ileo-cæcal intussusception, about 2 inches in length. The ileum about 8 inches from the ileo-cæcal junction was seen to be bound down by adhesions to the upper and back part of the pelvis for the extent of about 2½ inches. The appendix was partially embedded in these adhesions and was 6 inches long, club-shaped, and showed distinct signs of chronic inflammation. The intussusception was reduced easily. The adhesions joining the ileum to the pelvis were then divided and the raw area left was covered by transplanted omentum which was fixed in position by a few interrupted iodine catgut sutures. The appendix was removed and the abdomen closed. Ether, given by the open method, was administered by Dr. A. Ogston.

The recovery of the patient was uneventful. There was no post-operative vomiting and no special post-operative treatment was adopted. The bowels moved naturally 24 hours after operation, and in 56 hours the child was on ordinary hospital diet and looking exceedingly well. The skin sutures were removed on the fourth day and the boy left hospital on the tenth day after operation.

The interest of the above case lies in the fact of the lack of any very severe symptoms, the comparatively small extent of the intussusception, and of the spontaneous cure of the previous attacks, all of which were, without doubt, due to the presence of the adhesions between the lower part of the ileum and the pelvis, which prevented more than the "slack" of the ileum from entering the intussusception. The child has remained in perfectly normal health since the operation.

I am indebted to Mr. Gray, surgeon to the hospital, for permission to publish this case.

Sheffield.

NOTE ON A TOXIC EFFECT OF ASPIRIN.

BY ALEXANDER BROWN, M.B. LOND., M.R.C.S. ENG., L.R.C.P. LOND.

ASPIRIN is frequently taken by persons without medical advice, and a toxic symptom which I believe must be fairly common, though little commented upon, is therefore worth noting.

Several years ago I was called at night to see a man to whom I had that day prescribed tabloids (10 grain doses) of aspirin for rheumatic fibrositis of the shoulder muscles. I found him pacing his bedroom in a state of great alarm and presenting an extraordinary appearance. His face was bloated so as to be hardly recognisable, the lips were immensely swollen, the palpebral fissures were closed owing to œdema of the lids, the tongue was so enlarged that it could not be protruded, and he was unable to articulate. Large dusky wheals of urticaria covered the thorax and arms. The condition had developed suddenly. After some hours, during which I remained with him, giving him ice to suck and sips of cold strong infusion of tea, the condition subsided sufficiently to enable me to see his fauces, which were œdematous and dusky. All medication was stopped, and by next day the patient had recovered. I suspected the aspirin, but he himself ascribed the condition to food poisoning. At a later date, in order to test the accuracy of my opinion, I prescribed one tablet (5 gr.) of aspirin. This was followed by urticaria of the arms which lasted for a day.

A second experience of the kind has occurred in my practice. A young woman gave the following history. She had returned from business on a Saturday afternoon with a headache and had lain down for a few hours, and had then risen and dressed to go to an entertainment, but at the railway station she suddenly felt her lips, jaws, and tongue to enlarge, and she returned home in great alarm. Her mother stated that her face was almost unrecognisable, being covered with a swollen rash. When I saw her, an hour and a half later, there was nothing whatever to see except one or two faint blotches on the arms. I put the question, "Have you been taking any tablets?" "Yes," was the answer; "but only two aspirins for my head." The diagnosis was clear.

It is interesting to think whether such toxic effect is due to impurities in the drug, or whether it may be idiosyncrasy. Probably it is the latter, for though in the first case mentioned above the drug was probably pure, in the latter case there was not the same guarantee with the tablet. Nevertheless, the young woman remembered on three previous occasions to have taken aspirin without such result. And even if the toxic effect be due to impurity it is quite likely that idiosyncrasy must still be called in to explain the occasional poisoning which occurs among the hundreds of people who take the undoubtedly large number of impure specimens of the drug on the market.

Bartholomew-road, N.W.

NOTE ON A CASE OF TORSION OF THE TESTICLE.

BY WILFRID ATTLEE, M.D. CANTAB., M.R.C.S. ENG., L.R.C.P. LOND.,
ASSISTANT PHYSICIAN, KING EDWARD VII. HOSPITAL, WINDSOR.

THE following incident may prove of interest to the readers of THE LANCET.

A boy at school, aged 16½ years, was kicking a football about, and felt some pain in the right testicle. He took little notice of it, and came in when he had finished his game, had his bath, and ate his tea. The pain continued, however, and increased, and he began to feel faint and

vomited twice. I examined him about three hours after the first symptoms; he was lying on a couch looking white and faint, and evidently in considerable pain. The right side of the scrotum looked larger than the left, and the right testicle was drawn up towards the external ring. Palpation caused pain, but it was easy to make out that the external ring contained no hernia, that the right cord felt thick and hard, and that the right epididymis was in front of the testis, and lying towards the middle line. It seemed evident that the testis was twisted upon its cord, and probable, from the history, that the twist was in the direction of the hands of a clock, if one looked upwards towards the patient's head. Manipulation proved that this deduction was correct, for after turning the testis back through about a right angle the epididymis rotated with a jerk back to its normal position, and the pain immediately disappeared. Ten minutes later the boy had regained his colour and felt perfectly well. He has had no symptoms since.

The boy tells me that he had a blow on the right testicle some year or two ago, and he thinks this testicle has been a little smaller than the other since then. The right testis is certainly a little smaller than the left at the present time, but except for this there is nothing abnormal about it. It would be interesting to know why a testicle should stick in such a position, and whether such a condition would have righted itself if left alone, or gone on to strangulation and possibly to gangrene. At any rate, the apparent rarity of the occurrence seems sufficient justification for recording it.

Eton.

Reviews and Notices of Books.

A Treatise on Diagnostic Methods of Examination. By Professor Dr. HERMANN SAHLI, Director of the Medical Clinic, University of Bern. Edited, with additions, by NATHANIEL BOWDITCH POTTER, M.D., Assistant Professor of Clinical Medicine at Columbia University (College of Physicians and Surgeons), New York. Second edition, revised. Authorised translation from the fifth revised and enlarged German edition. London and Philadelphia: W. B. Saunders Company. 1911. Pp. 1229. Price 27*s.* 6*d.* net.

Professor Sahli's book on diagnostic methods is so well known and has attained such an established position as a standard work of reference that any detailed review of its contents, even if such were possible within small limits, is unnecessary. We may therefore confine ourselves to a brief notice of its scope and general character, with mention of some of the new matter included in this, the second English, edition.

The term "diagnostic" methods is taken to comprise any procedure which is calculated to afford information in regard to the diagnosis of a patient's condition. Consequently it includes physical methods, as well as the laboratory and instrumental investigations which are now so various and of such wide application. The descriptions given are always practical and sufficiently detailed to enable the process under consideration to be carried out. Although many alternative methods may be described, Professor Sahli invariably states which, in his opinion, is the most reliable. His book is no mere collection of methods copied from other works or from special monographs, but a carefully digested presentation of his own experience. It is this personal note which gives the special character to the book, and renders it one to which reference may be made for practical assistance in working out the nature of difficult cases. It also contains a number of original observations upon many matters which have not been published elsewhere.

In connexion with the nature of fever Professor Sahli rejects the commonly accepted view that it is due to a disturbance of heat regulation, and suggests that it is essentially a circulatory disturbance by which blood is diverted from the skin to the deeper organs, with the results that heat dissipation is lessened and the febrile rise of temperature brought about. He believes in the existence of "latent fever"—i.e., a febrile disturbance of the circulation without rise of temperature. He also maintains that fever is purposeful, and that the altered circulatory conditions act beneficially by bringing more blood to the damaged viscera. The raised temperature is, in his view, a by-effect, and not necessarily beneficial. Some interesting observations upon dyspnœa are directed to showing that this is strikingly adapted to the particular respiratory obstruction causing it. Some tracings by Hofbauer showing graphically various types of respiration are included.

The newer methods of investigation of the circulatory system are examined at some length, and copious illustrations of the instruments used and of the tracings obtained by them are given. Professor Sahli, however, urges caution in the interpretation of small waves upon the venous tracing, especially in conditions of irregularity. It is remarkable that no mention of electro-cardiographic methods is made in this connexion. In referring with approval to Bäumler's work upon arterio-sclerosis, it is maintained that this condition is often diagnosed upon insufficient grounds and that arterio-sclerotic changes are frequently very unevenly distributed, so that thickening of a superficial artery is not sufficient evidence of general arterio-sclerosis. The chapter on percussion contains a full discussion of the explanation of the percussion note and of its modifications.

The methods of examination of the stomach and intestines are described at great length. In particular the analysis of the gastric contents and the use of various test meals, with the information obtainable from them, are exhaustively dealt with. Professor Sahli's own methods, including the desmoid and glutoid tests, and the butyrometric process for examination of the gastric functions, are fully discussed and defended against the criticisms to which they have been subjected. The sections dealing with the examination of the urine, sputum, and blood are brought fully up to date. Professor Sahli brings forward a suggestion that pernicious anæmia is a consequence of diminished hydrochloric acid in the gastric juice, with a resulting diminution in the absorption of iron. He reviews the main facts of the disease in the light of this theory. He minimises the importance of hæmolytic processes in this disease, but his arguments do not seem to us to carry conviction. The question of exploratory punctures is fully discussed, and the new work upon the cytology and chemistry of the fluids obtained is included. The examination of the nervous system is discussed systematically and is as exhaustive as the other sections of the book. The subject of aphasia is considered in detail, and the recent views of P. Marie are criticised adversely.

The book is copiously illustrated by diagrams, plates, and photographic reproductions. The translation has been well done, and the editor has contributed numerous notes. Many of the illustrations of cases have apparently been added by him, as they are derived from American sources. We can recommend this book as a valuable work of reference.

Lehrbuch der Magen- und Darmkrankheiten mit besonderer Berücksichtigung der Diätetischen und Medikamentösen Therapie. (*Text-book of Diseases of the Stomach and Intestines, with Special Consideration of Dietetic and Medicinal Treatment.*) Für praktische Aerzte und Studierende. Bearbeitet von Dr. P. RODARI, Privatdozent an der Universität, Zürich. Zweite völlig umgearbeitete und bedeutend erweiterte Auflage. (Second fully revised and enlarged edition.) Wiesbaden: J. F. Bergmann. 1910. Pp. 521. Price 12 marks, or 12*s.*

THE clinical investigation of diseases of the digestive organs has been enriched by numerous methods of examination which have rendered diagnosis and treatment of these conditions much more rational and exact than was formerly

possible. Dr. Rodari in his introductory chapter complains that these methods are not yet sufficiently applied, either by practitioners or by many hospital teachers. He states that superficial diagnosis depending upon some prominent symptom or sign, such as dyspepsia, constipation, diarrhœa, and dilated stomach, are still much too common, and that practitioners, who would not be satisfied by a superficial diagnosis of heart disease in a case of valvular lesion, are content with equally vague statements in diseases of the digestive organs. Dr. Rodari's book is well adapted to supplying the information necessary to remedy these deficiencies, for it affords an exhaustive consideration of the etiology, pathology, symptoms, signs, and methods of investigation of these diseases, and in addition gives full details both in regard to diet and medicinal treatment.

The section devoted to diseases of the stomach is divided into two parts. The first treats of the general diagnosis of gastric conditions and includes an exhaustive review of questions of diet, drugs, balneotherapy, and physical methods in the treatment of gastric disorders. In the second part, the individual diseases are separately considered. Dr. Rodari gives valuable directions for obtaining a satisfactory history from patients, each symptom being clearly discussed in regard to its value and significance. The various methods of examination and the chemical and other measures devised to investigate the physiological efficiency of the stomach are described in detail. The individual diseases of the stomach and disorders of the gastric functions are exhaustively considered. We may mention the description of gastric ulcer as being an admirable presentation of the subject. The treatment is described in full detail, and the merits of the various diets recommended, notably those of Leube and Lenhartz, are critically discussed. Dr. Rodari is in every case careful to give reasons for his statements, in the form of references to authorities or to experiments made by himself with special reference to the matter under discussion. The subject of nervous gastric affections, or neuroses of the stomach, is also dealt with in an interesting and lucid manner.

The second part of the book deals with diseases of the intestines. This also is divided into two sections. The first is devoted to general considerations, while the second deals categorically with the individual affections of the intestines. In the general part the symptomatology of intestinal diseases is critically reviewed, and the various diets, drugs, and other therapeutic measures are discussed. The purgatives, astringents, and antiseptics are especially considered. The classification of the intestinal affections given by Dr. Rodari is simple and convenient. He describes the various inflammatory conditions of the mucous membrane, including acute and chronic enteritis, membranous colitis, and appendicitis. The next group comprises the ulcerative conditions of the bowel, including duodenal ulcer. New growths are then dealt with. Anomalies of the intestinal muscle, including intestinal atony and atonic constipation, form a separate section. The various forms of intestinal obstruction are classified and described, with their diagnosis and appropriate treatment. The neuroses of the intestinal tract are then considered, and are divided into sensory, motor, and secretory. Affections of the rectum and anus are dealt with in a separate section. The account given of appendicitis is perhaps less exhaustive than the other parts of the book, and the discussion of the treatment, more especially in regard to the choice of cases for surgical treatment, is also less critical than its importance would warrant. Dr. Rodari reserves catarrhal cases for medical treatment, and speaks highly of opium for the purpose. Although he mentions the objection that it is liable to mask the progress of the symptoms, he does not lay so much emphasis upon this point as is customary in this country.

As a useful and authoritative work of reference in regard to diseases of the stomach and intestines we can commend this book to our readers, the more so that the sections on treatment are so full and practical.

Operative Midwifery. By J. MUNRO KERR, M.D., C.M. Glasg., F.R.F.P.S. Glasg., Professor of Midwifery and Diseases of Women, Anderson's College Medical School; Obstetric Physician, Glasgow Maternity Hospital. Second edition, with 299 illustrations in the text. London: Baillière, Tindall, and Cox. 1911. Pp. xxiv.–703. Price 21*s.* net.

IN the second edition of this excellent work Dr. Munro Kerr has found it necessary to make very few alterations. In the section on pubiotomy he expresses himself as more in favour of the operation than he did in the first edition, and now comes to the conclusion that this operation is safer than symphysiotomy, although only slightly so. He does not consider that either of these operations should be performed on a primipara, and in this he disagrees with Whitridge Williams; nor does he think that they are suitable for private practice, conclusions in which he will have the support of the majority of obstetricians. Two new illustrations of the subcutaneous method of performing this operation are given, and it is a pity that they are both inaccurate and do not agree with the text. As the author rightly says, the needle should be introduced between the labium minus and the labium majus, while in the pictures it is shown introduced between the latter and the skin of the thigh.

In the preparation of the patient before performing Cæsarean section it is gratifying to see that the author has abandoned, with rare exceptions, the douching of the vagina, upon which he laid so much stress in the last edition. Supravaginal amputation of the uterus is described in more detail, and a short account is given of the various methods of performing extra-peritoneal Cæsarean section. Dr. Munro Kerr does not believe that this operation will ever give better results in infected cases than the ordinary operation, but he is inclined to think that the uterine cicatrix may be sounder when made in the lower uterine segment than in the active contractile portion of the uterus. With this view we are unable to agree, for we regard the matter as mainly one of care in the suturing of the uterine wall. It will be noticed with interest that the author has returned to the use of silk for stitching up the uterine wall and has given up catgut, and in this we are in entire agreement with his practice.

In discussing the question of performing Cæsarean section for cases of placenta prævia the author adopts a much less antagonistic attitude towards this procedure than he formerly did, and he has himself performed the operation in one case. He suggests that in the case of an old primipara, where the hæmorrhage occurs at full term and before labour has started, and where, to judge by the condition of the parturient canal and the size of the child, delivery may be tedious and difficult, the operation may be justifiably performed. He believes that it may be possible to obtain as low a mortality as from the recognised modes of treatment in such a case. In the operative treatment of rupture of the uterus Dr. Munro Kerr is on the whole in favour of pan-hysterectomy, but thinks that simple stitching of the peritoneum and drainage may be sufficient in some cases. His own mortality from the former operation has been only 40 per cent., while after supravaginal amputation of the uterus he has had a mortality of some 60 per cent.

As was said in our notice of the first edition of this book, it is a work of the greatest possible merit, and we feel sure that

this second edition will meet with just as favourable a reception as did the first. We can heartily recommend it to students and practitioners.

Death: its Causes and Phenomena, with Special Reference to Immortality By HEREWARD CARRINGTON, late Member of the Council of the American Society for Psychical Research; and JOHN R. MEADER ("Graham Hood"), Member of the Society for Psychical Research. London: William Rider and Son, Limited. 1911. Pp. 552. Price 8*s.* 6*d.* net.

THIS book, with its black binding, its golden imprint of death, and a butterfly on its cover, and the representation of a lighted terebratula lamp on its broad back, is divided into three parts: Physiological (pp. 1–234), Historical (pp 237–291), and Psychological (pp. 295–518). In the first part Brouardel's well-known work dealing with "Death and Sudden Death" is drawn on largely in the chapter on "The Signs of Death." On p. 20 there appears an extraordinary mistake in connexion with Kühne's well-known experiment on the visual purple of the rabbit's eye. Kühne is described as having "removed the eye, exposed the retina, and photographed it." Trance, catalepsy, and suspended animation lead on to premature burial with citation of cases and quotations, some of which may interest the credulous.

A short chapter on Burial, Cremation, and Mummification, and a longer one on "The Causes of Death," lead on to the scientific study of old age. It is stated that practically everyone dies prematurely, and that the margin of cases of natural death is small indeed. Again there are plenty of quotations. A comparison follows of the well-known views of Metchnikoff and those of C. S. Minot on this subject. "The authors having failed," we are next told, "to derive any satisfactory explanation of death from the literature of the subject and from historic research," they evolved a project of their own, which they call "the questionnaire on death." They sent a circular letter to certain persons asking the following question, "What do you consider to be the real nature of death?" and 30 pages are given to the replies and comments. We may quote part of a reply from Dr. A. C. F. Rabagliati. "Natural death is the departure from the body of anthropino-bio-dynamic. ..... The immediate cause of human natural death is nearly always such a choking up of the human house of life by excessive exercise of tropho-dynamic—i.e., polysiterism, kako-siteism and pollaki-siteism and polypotism, that anthropino-bio-dynamic is compelled to leave the body, as it is no longer a fit house for life." Mr. Carrington offers the following theory of natural death: "It is the inability of the life force to raise to the requisite rate of vibration the nervous tissue upon which it acts—its manifestation thus being rendered impossible." Mr. Meader has another theory, which is set forth *in extenso*, and then a chapter is devoted to "The Possible Unification of Our Theories." The whole winds up with a quotation from Stevenson's "Aes Triplex."

Part II. gives an account of theories of immortality, and the reader soon runs up against Spiritualism, or better, Spiritism. "The discarnate soul on entering the future world carries with it the *perisprit* or astral body which it had possessed during the period of its earthly existence," and so he is led on to "Theosophy," a "more mystical philosophy." Then come disquisitions on the philosophical and theological aspects of death, ending with the ordinary arguments for immortality. About one-half of the book is devoted to the psychological aspect, including such subjects as the moment, the hour, the pain of death, the visions of the dying, and "death described from beyond the veil," including clairvoyant descriptions and the process as described by "spirits," with liberal quotations from psychical research societies. The photography and weighing of the soul are next dealt with and illustrated by three photographs. The story of the "Testimony of Science and Psychical Research" includes well-known so-called manifestations, with all of which a public, not so credulous as formerly, is familiar—raps, independent voices, the exploits of the medium Home, and of the notorious Eusapia Palladino, clairvoyance, haunted houses, planchette writing, *et hoc genus omne*. There is no reference to Richet and the photograph he published in *Le Matin*, which elicited some very discomforting and pointed criticism. The authors wind up with the difficulties of intracosmic communication, a bibliography, and some appendices, and conclude that they have furnished "a quantity of material, all evidence of the supernormal and pointing to 'spiritism' as its most intelligent interpretation, which must be looked on as a rational theory, and accepted provisionally as a 'working hypothesis.'" These views will leave a cold world unconvinced.

The Treatment of Neurasthenia by Teaching of Brain Control. By Dr. ROGER VITTOZ. Translated by H. B. BROOKE. London: Longmans, Green, and Co. 1911. Pp. 117. Price 3*s.* 6*d.* net.

THE author of this small volume addresses himself chiefly to those who are actually suffering from neurasthenia and psychasthenia, and in this respect the book differs from the sort of therapeutic treatise which we review in these columns. He has endeavoured to simplify his language for the sake of his audience, but it is questionable whether the result is satisfactory. It is unfortunate, if the book is to be put into the hands of laymen, that it should contain matter so highly controversial as the author's hypothesis—on which, indeed, the rationale of his treatment is based—that "the physician's hand can, when placed on the patient's forehead, give him sufficiently exact indications as to the working of the latter's brain," whatever that may mean. The writer contends that through the skull one can feel a repercussion during mental activity on the part of the subject, which gives a series of pulsations producing the effect of an undulation or of a peculiar vibration. If the subject's mind wanders (though surely it does not therefore cease "working") a check in the vibrations will be felt at once. If the patient decides to will, makes up his mind to use his will, the physician feels the vibrations doubled or tripled. To enable the sufferer to regain lost control over himself and his functions, exercises of concentration are recommended, to be carried out for ten minutes every two hours, the mind being concentrated on the figure 1, or on the symbol of infinity ∞, or on different parts of the body. Then he teaches himself different methods of elimination and deconcentration, and then of concentration on an idea pure and simple. After two or three months, the author says, he should be practically well. In the author's hands the results obtained have, he says, surpassed his hopes and well rewarded his labours. In that case it would seem that he has been somewhat lucky in his subjects.

Principles of Therapeutics. By A. MANQUAT, National Correspondent to the Académie de Médecine. Translated by M. SIMBAD GABRIEL, M D. London and New York: D. Appleton and Co. 1910. Pp. 298. Price 12*s.* 6*d.*

THE author of this work remarks in the preface that there is a general impression that therapeutics is a very imperfect science. He considers that it would be more exact to say that it is an encumbered science, which is not studied with the attention it deserves, and that it is not practised with sufficient precision. He, therefore, attempts to lay down certain principles to guide practitioners in the right direction.

In attempting to define therapeutics he maintains that therapeutic science comprises two elements: (1) a knowledge, as exact as possible, of all the forces that the organism can utilise in its struggle against a morbid state, whether these forces affect the organism itself or the cause of the disease, or produce a result upon both at the same time; and (2) a knowledge of the needs of the suffering organism. He rightly points out, however, that in some instances the needs of the organism are not sufficiently understood; in others the mode of action of the measures opposed to the morbid state is not quite clear. It may also happen that both the essence of the disease and the mode of action of the remedy have not been fully explained, and he instances gout and its specific remedy, colchicum. He argues from this that a complete definition must take into consideration the empirical treatment of disease, acceptable when its efficacy is made certain by a long series of favourable observations.

Taking into account these various factors the author suggests the following definition of therapeutics: The science of the utilisable modifiers of the organism, of morbid causes and of diseases, and the art of applying their properties to the profitable correction of disturbances of health. This definition is certainly comprehensive; the use of the two words *science* and *art* is justifiable, and the extensive knowledge which is required before a satisfactory course of treatment can be laid down is duly indicated.

We have in this work an attempt to show a distinction between therapeutic actions and physiological actions, but the arguments, though interesting, are not convincing. From such chapters as those entitled "Of the Action of Medicines; Doses; the Elements of Therapeutic Individualisation"; "Influence of Environment on Therapeutics"; "Results and Variations of Therapeutic Activity Inherent in Medicines," the reader will grasp the nature of the book. Considerable information can be derived from a perusal of it. It is quite different in character from most works on therapeutics, and hence gives rise to new ideas which are instructive and suggestive.

The Climatic Treatment of Children. By FREDERICK L. WACHENHEIM, M.D., Chief of Clinic, Children's Department, Mount Sinai Hospital Dispensary, New York. London: Rebman, Limited. 1911. Pp. 400. Price 6*s.* 6*d.* net.

IT may well be asked whether the elasticity of the library of pædiatrics has any limits. We are told, however, on the authority of Dr. Frederick L. Wachenheim, that there is a definite lacuna on its shelves for a work on the climatotherapy of early life. For ourselves, after reading this book, we are not convinced of the urgency or expediency of a work on this subject. The hygienic exactions of childhood already strain to the breaking point the endurance of the full-quivered paterfamilias. His cup of bitterness would indeed be full to overflowing if he were compelled by the force of public opinion to consult a specialist before he took off his family of children for the annual "cure."

A long chapter is devoted to the general principles of climatology, and this chapter is the only one that we can honestly commend to the notice of English readers. It certainly does contain a large amount of useful information on the physiological and psychological effects of temperature, humidity, cloudiness, rain, atmospheric pressure, and phototherapy. A good definition and explanation of the pathological condition known as enervation is also given in this chapter. The term "sensible temperature," which was first given to the medical profession by Harrington, is fully explained, and its importance emphasised. On p. 7 the author explains that "the nude body of a healthy adult maintains its normal warmth of 99 degrees most easily at an air temperature of about 80," a sentence which is probably more correct in its general significance than its exact phraseology. Then there is a chapter on the Climatology of Temperate North America; there is one on Health Resorts, another on Constitutional Diseases, a penultimate one on Visceral Disease, and a final one on Scrofulosis and Tuberculosis. There is also a chapter on the Climatic Management of the Normal Child—we presume the normal American child, for we cannot think that the line of treatment recommended in the chapter would be suitable for the hardier and normal English child; at least, we feel sure it would not so appear to the normal English parent. Dr. Wachenheim has a prejudice, or shall we say a scientific objection, to cold air, cold water, and the open window, and the word "harden" is to him apparently anathema. He likes windows to fit, hot steam to warm rooms, and a temperature of about 68° F. to be maintained in the nursery. He devotes many pages to the proof not that the so-called hardening process is unsound in theory or in practice, but that his conception of the term differs from that held by "even cool-headed practitioners who have been carried away by this monstrous fad."

In Dr. Wachenheim's book the whole teaching with respect to the hygienic management of infants and children is utterly opposed to what we believe in and hold most dear in this country. We believe in cold air, cold water, and the open window, and when we are told to keep an infant indoors for the first month of its life for fear of its catching cold, we cannot help feeling that the "Climatic Treatment of Children" had better be kept out of the hands of the specialist.

Die Kinder-Seehospize und die Tuberkulose Bekampfung. (Seaside Hospitals for Children and the Fight against Tuberculosis.) By Dr. HÄBERLIN. Leipzig: Verlag von Dr. Werner Klinkhardt. 1911. Pp. 338. Price 6 marks.

THIS volume contains a large amount of information concerning hospitals for children and convalescent homes situated at the seaside in European countries. An interesting account is given of the history of the subject, due credit being given to English physicians for the part they have played in the establishment of such institutions. Attention is drawn to the writings of Dr. Richard Russell (1700–1771) and of Dr. W. Owen (1750). It is interesting to note that the latter actually published "A Dissertation Concerning the Use of Sea-water in Diseases of the Glands."

A full account is given of the various diseases in which benefit is likely to be obtained by residence and special treatment in seaside resorts—such maladies as anæmia, bronchial catarrh, asthma, various disorders of digestion and of the nervous system. The most important, however, are those conditions included under the term "scrofula." This expression is gradually disappearing from English medical literature, but is still extensively used in other countries. Baginsky defined the term as indicating a peculiar constitutional condition which afforded a favourable nidus for various diseases, especially tuberculosis. Chief amongst such conditions are affections of the glands, and it is generally accepted that the open-air life and pure air which can be obtained by the seaside are particularly favourable to delicate children who exhibit tuberculous glandular enlargements. A good account is afforded by Dr. Häberlin of the general effects of sea air, and examples are given of the excellent results obtained in a large number of cases.

A brief description follows of the various seaside institutions throughout Europe. Amongst English hospitals and convalescent homes are mentioned St. Joseph's Home at Bournemouth, the Royal Sea Bathing Hospital at Margate, and the All Saints' Convalescent Hospital at Eastbourne. Mention is also made of numerous similar establishments in

Italy, France, Germany, Russia, Holland, Austria, Belgium, Denmark, Sweden, Norway, Spain, Portugal, Greece, and Roumania.

Dr. Häberlin has been thorough in the manner in which he has carried out his work, and has collected a valuable amount of knowledge concerning the therapeutic effects of sea air and the localities in which special treatment may be obtained.

Atlas of Microscopic Diagnosis in Gynecology. With preface and explanatory text by Dr. RUDOLF JOLLY. Translated by P. W. SHEDD, M.D., New York. With 52 lithographs in colour and two textual figures. London and New York: Rebman Company. 1911. Pp. 192. Price 25*s.*

THIS atlas consists mainly of 52 coloured lithographs illustrating the chief gynæcological affections which can be shown under the microscope. The illustrations are good and well reproduced. Among the conditions illustrated are the normal mucosa of the uterus and its changes in pregnancy and menstruation, erosions of the cervix, the various forms of endometritis, carcinoma and sarcoma of the uterus and vagina, simple polypi, and two figures of vaginal secretions. As to the importance of diagnosis from the inspection of scrapings of tissue taken from the uterus there can be no question, and the subject is one of increasing value in these days of the extended operation for cancer of the cervix. After a short account of the operation of curettage a description is given of the best methods of imbedding and staining sections.

The plates are accompanied in each case by a short descriptive letter press. Dr. Jolly retains the term endometritis, even for conditions which are not actually of an inflammatory nature, for the reason that the pathology of the process, in his opinion, is not yet fully elucidated, and the plasma cells which have been considered as a criterion of the presence of inflammation are not only sometimes absent in inflamed tissues, but may be found in healthy tissues. He also maintains that the changes in the glands are in some cases so extreme that the primary morbid process must have taken origin in them. It would hardly seem that this is any reason for retaining the application of the term endometritis to all kinds of very different processes.

It is possible that the original German text is well written; we regret that we cannot say the same for the translation. The translator has sacrificed style for literalness, and the result is most indifferent; indeed, it is difficult to believe in many places that one is supposed to be reading the English language. Since the main feature of the book, however, is the illustrations this is not of much importance. At the same time it certainly would have made reference to the work more attractive if the translator had succeeded in rendering the German text into something like passable English.

Lehrbuch der Ohrenheilkunde (*Text-book of Otology*). By Dr. VIKTOR URBANTSCHITSCH. Fifth, fully revised, edition. With 156 illustrations in the text. Berlin and Vienna: Urban und Schwarzenberg. 1910. Pp. 621. Price 18 marks.

THIS is the fifth edition of Dr. Urbantschitsch's well-known text-book—a fact which proves that the medical public on the continent knows how to appreciate good work. As a systematic presentation of modern otology the book, indeed, leaves little to be desired. Perhaps the English reader, spoiled by the attractive externals of his medical text-books, especially of those published across the Atlantic, may complain that, outwardly at all events, Dr. Urbantschitsch's work looks commonplace beside the picturesque volumes he is accustomed to. But when he turns to the subject-matter and finds each section handled in a style which is lucid and readable, albeit typically German in its construction, he forgets the absence of surface glitter in the solidity and worth of the matter presented to him.

In his systematic arrangement and descriptions the author is thorough, and in his expressions of opinion he is moderate and liberal. Perhaps a little more decidedness in tone on certain points would not be considered as a drawback coming from a writer of the standing and experience of Urbantschitsch. On the other hand, those who desire to become acquainted with the literature or to ascertain the clinical and experimental research undertaken in any particular branch, will find the fulness of statement and the wealth of reference of the greatest possible value.

Apart from its all-embracing exposition of the labours and opinions of other investigators, the book is further of interest in that it contains a detailed account of the author's method of treating deafness by means of the use of hearing exercises. Critically regarded, we confess that while we admit that these exercises may prove serviceable in arousing the deaf from their mental lethargy and dulness, we do not see how they can ameliorate hardness of hearing directly due to organic lesions in the ear itself. In the treatment of chronic dry catarrh of the middle ear the author speaks well of the action of galvanism, and expresses his regret that this method has fallen into disuse. Doubtless his careful advocacy of it will stimulate other otologists to give it a fresh trial. Acute suppuration of the middle ear is sometimes treated by the Bier hyperæmic method, and the author cites in its favour the opinions of several authorities. But he seems to have overlooked the publication of articles by at least one German writer of good standing, whose experience of the treatment has been decidedly unfortunate.

As has been already hinted, the illustrations cannot be commended. That representing the naso-pharynx and posterior choanæ (Fig. 30), for example, is too inaccurate for a standard work of this kind. The book is furnished with a carefully constructed index, always a welcome appearance in a continental publication.

Ueber den Selbstmord, insbesondere den Schüler-Selbstmord. (*Suicide, especially of School Children.*) Beiträge von Dr. ALFRED ADLER, Professor S. FREUD, Dr. FRIEDJUNG, Dr. KARL MONITOR, Dr. REITLER, Dr. SADGER, Dr. STEKEL, Unus multorum. (Diskussionen des Wiener Psychoanalytischen Vereins.) Wiesbaden: J. F. Bergmann. 1911. Pp. 60. Price M.1.35, or 1*s* 6*d.*

THIS is the first of a proposed series of brochures containing certain of the proceedings of the Vienna Psychoanalytical Club. It is concerned with the question of suicide, more particularly among school children, a topic on which varying opinions are expressed, and it forms instructive reading.

If some of the speakers are to be credited, the school benches of to-day are peopled with hypermodernist poets, revolutionary politicians, ultra-human philosophers, and love heroes of all sorts, no doubt still in embryo, but yet the product of modern educational methods and social conditions. To the arduousness of the school *régime* is attributed the revolt of such young folk, and if there have been geniuses, from Klopstock to Nietzsche, who have been content to leave school with the reputation of "Schwachköpfe," there are others who are so morbidly conscious of their own inferiority as to end it by violent means. Due importance is attached to the working of suggestion, a factor also at work in some veritable epidemics of suicide, both recent and remote. The case is quoted of a Viennese youth who was

granted permission to examine a collection of weapons, and utilised it to select the most suitable for ending his life.

Dr. Adler has found that all neurotic patients whom he has examined psycho-analytically, including those with suicidal ideas, possessed a deep consciousness in their youth of some or other form of inferiority, either physical or mental. By way of escape from this sense of inferiority most of such individuals enter on a stormy struggle for compensation of their defects. Hence their life becomes doubled; conscious of their weakness they persevere to exhibit their strength; a state of "psychical hermaphroditismus" ensues, and it is this mental state which often leads to suicide or attempts at suicide. Professor Freud questions whether school should be held responsible for much of the youthful suicide of the day, but discovers a tendency among teachers to forget the immaturity of their charges. Instead, he says, of impressing young scholars with the pitilessness of life, the teachers should try to make school days simply a "Lebensspiel."

LIBRARY TABLE.

The Conquest of Consumption, containing Advice to Sufferers Before, During, and After Sanatorium Treatment, with Practical Suggestions for the Avoidance of Infection, and as to the Conduct of the Campaign against Tuberculosis. By E. W. DIVER, M.D. Durh., M.R.C.S. Eng., L.R.C.P. Lond., Fellow of the Royal Society of Medicine; late Resident Physician, "Belle Vue" Open-air Sanatorium, Shotley Bridge. With 6 illustrations. London: John Bale, Sons, and Danielsson Limited. 1911. Pp. 135. Price 2*s.* 6*d.* net.—This book, with a somewhat *ad captandum* title, aims to give information to sanatorium patients on various points which the author's experience has led him to regard as likely to be useful and interesting to them. It is mainly based on notes taken down by him during conversations with patients in the ordinary course of sanatorium duty. All will agree with the author that "if the war against consumption is to be carried on with success we must utilise *all* the forces at our disposal." The author discusses heredity and resistance in popular terms. In the section on Sanatorium Treatment he insists that the latter counts for much more than merely "fresh air and food." Many patients, he says, who live in healthy surroundings find it necessary to go into a sanatorium after a disappointing trial of home treatment. The advantages of sanatorium treatment he summarises as follows: Structural fitness of the patient's residence; constant medical supervision; avoidance of infection of others or of self-reinfection; rest and exercise apportioned to his varying condition; regular hours and proper food properly prepared and rightly administered; removal from the influence of injudicious friends; skilled observation of his condition helping to avert impending unfavourable changes; due allowance for temperament and disposition; guidance regarding amusements, clothing, and so forth; and immediate treatment of pathological accidents. Some serviceable advice to patients is given, and among other things an ingenious form of outdoor shelter, designed by Mr. H. Norman Marrett, and in use at Merivale Sanatorium, is described, with illustrative photographs. The floor, which is made in four quarters, each 6 feet square, for ease of transportation, consists of planks fixed on joists, which raise it a foot from the ground, thus allowing of a free current of air underneath. It is covered with stout linoleum. The roof, sides, and door are made of canvas stretched on wooden framework. For the roof the canvas, which here is nailed directly on to the framework, is treated with linseed oil, boiled and filtered, so as to render it waterproof without obstructing the passage of light. The sides are more complicated, consisting of canvas shutters so arranged that they can be raised or lowered by cords and pulleys, yet the canvas remains taut, obviating flapping and draughts. Save for purposes of privacy during dressing, it should never be necessary to close more than two sides of the shelter at once, and then only on account of wind or rain. The patient thus gets the maximum of both air and light, while protected against wind and rain. Such a shelter, it is claimed, can be constructed for from £18 to £20. The subjects of rest and exercise, food, temperature, recreation, and the duration of treatment are dealt with in a practical little book.

Congenital Dislocation of the Hip. By J. JACKSON CLARKE, M.B. Lond., F.R.C.S. Eng., Senior Surgeon to the Hampstead and North-West London Hospital, and Surgeon to the Royal National Orthopædic Hospital. London: Baillière, Tindall, and Cox. 1910. Pp. 92. Price 3*s.* 6*d.*—Opinions in this country are still divided as to the best treatment to adopt in dealing with congenital dislocation of the hip, and comparatively few surgeons here practise the bloodless method of Lorenz. One of the chief exponents of the Lorenz method in England is Mr. Jackson Clarke, and he has done well to set forth in this little volume the mode in which he carries out the operation; for an operation it indeed is, although no incision is made. He gives the reader a full account of the pathology of the condition as well as of the mode in which the operation should be performed, and of the important post-operative treatment. The author maintains that nearly 75 per cent. of these cases can be cured if operated on at a suitable age, and he gives notes of a series of 40 consecutive cases. While it cannot yet be determined what position the operation will ultimately assume, it is certain that the results obtained in some cases are extraordinarily good.

The Goulstonian Lectures on the Sensibility of the Alimentary Canal. Delivered at the Royal College of Physicians of London on March 14th, 16th, and 21st, 1911. By ARTHUR F. HERTZ, M.A., M.D. Oxon., F.R.C.P. Lond., Assistant Physician and Physician-in-Charge of the Department for Nervous Diseases, Guy's Hospital. London: Henry Frowde and Hodder and Stoughton. 1911. Pp. 83. Price 5*s.* net.—As these lectures were published in our columns in the issues of April 22nd and 29th and May 6th, and were commented on in a leading article on the last-named date, we need only repeat, for the information of those who may not have read them, that "Dr. Hertz's conclusions will be found to be full of interest, presenting as they do many new ideas, and suggesting that some of the views hitherto held as to the cause of many common symptoms are not correct."

Médications Générales. By Dr. C. BOUCHARD and other physicians. Paris: Baillière et Fils. 1911. Pp. 700. Fr. 14.—This volume forms one of the series published under the title of "Bibliothèque de Thérapeutique," the editors of which are Dr. A. Gibert, professor of clinical medicine at the Paris Faculty of Medicine, and Dr. P. Carnot, professor of therapeutics at the same Faculty. Amongst the several subjects considered in this volume are the following:—The Treatment of Certain Infectious Conditions by Sera, Vaccines, and Balneological Measures, by Professor H. Roger; the Treatment of External Parasites, by Dr. Sabouraud; the Treatment of Internal Parasites, by Dr. J. Sabrazès; the Treatment of Poisoning, by Dr. G. Pouchet; the Treatment of "Accidents" due to the Use of X Rays, by Dr. Paul Carnot; and the Treatment of Disorders of Nutrition, by Dr. R. Lépine. It will thus be seen that the range of therapeutical studies is a wide one, and includes subjects not usually found in one volume. Each article is written in a thorough and practical manner, so that as a work of reference this volume will prove of considerable value.

The Birds of the British Islands. By CHARLES STONHAM, C.M.G., F.R.C.S., F.Z.S., with illustrations by LILIAN M. MEDLAND, F.Z.S. London: Grant Richards, Limited. 1911. In 20 Parts. Parts XIX. and XX. Price 7*s.* 6*d.* each.

Part XIX. contains descriptions of the divers, petrels, grebes, shearwaters, and puffins, and with but few of these birds will many of us be acquainted at all closely, while the specimens seen in our islands are very usually immature. The puffin we may have seen in Scotland—notably in the Hebrides—in many places on the Irish coast, and in England off Flamborough Head and on Lundy Island. Of the divers, who like the puffins live by diving for small fry, although two breed in the United Kingdom, only the red-throated diver is at all generally distributed. The great crested grebe we may have seen, though not perhaps with the good fortune of Miss Medland, who draws an excellent picture of the mother taking a nestling out for a swim on her back. It is good hearing that this beautiful and graceful bird is on the increase, after indiscriminate destruction, partly in protection of fish, but partly to minister to female vanity. Mr. Stonham, however, notes that the bird is still in demand for making hats and muffs, and probably, like others who have considered this subject, he believes that appeals against the dictates of fashion have little force. The storm petrel has passed into general literature as a harbinger of trouble, and is therefore familiar to all of us by name; but how many know the origin of the word petrel? Of this bird a life-size picture is given in the characteristic skimming flight with legs down-dropped just above the waves, and from this the name "petrel" is derived through the French word *pétrel*, diminutive of Peter. For, as Mr. Stonham tells us—and here all who have gone a sea voyage will recognise the justice of his description—the petrel is rarely seen on the water, but constantly on the wing a foot or two above the surface and following the undulations, while its dependent legs give it the appearance of paddling. The imaginative sailors named it "Little Peter," because it appeared to be trying to walk on the water.

Part XX. and the closing pages of the preceding volume contain new records of rare species which have been published since this work was begun, and notes on a few new species which have been added during that time to British avifauna. The records, alas, seem sometimes to mean the death of the rarity. The remaining part of this volume contains the scientific and English indices, an admirable glossary, and a very large, if not exhaustive, bibliography. The bibliography, the work of Mr. W. H. Mullens, has not been planned as a reference to the books and papers quoted in "Birds of the British Islands," but is a compilation intended for the use of those studying British ornithology.

With the issue of these two parts the interesting zoological work upon which Mr. Stonham has been so long engaged is completed, and we congratulate him upon the successful termination of his labours. They have been labours of love as all can appreciate who have read the accurate and breezy notes on bird-life, which record his personal observations. In his illustrator he has been most fortunate, as we have on previous occasions pointed out in these columns. Miss Medland's delineations of birds in their haunts have been invariably spirited as well as accurate, and she has triumphed in a remarkable manner over the limitations imposed upon her by the use of only black and white, and by the necessary reduction in scale of many of her pictures. The *format* of the work also justifies Mr. Stonham's warm acknowledgment of the part played in the issue by the publishers, and by Messrs. Brendon and Messrs. Annan, respectively the printers and engravers.

Vocal Science and Art, being Hints on the Production of Musical Tone. The Boy's Voice; Muscular Relaxation; the Art of Deep Breathing; Elocution for Ordination Candidates. By the Rev. CHARLES GIB. With numerous illustrations, together with an Introduction, Notes, and Diagrams by J. F. HALLS DALLY, M.A., M.D., B.C. Cantab., M.R.C.P. Lond., &c. London: William Reeves. 1911. Pp. 118. Price 3*s.* 6*d.*—Mr. Gib starts off with a destructive criticism of the theories of voice-production of Mr. E. C. White. He then passes on to a consideration of the boy's voice, emphasising the importance of deep breathing and muscular relaxation as taught and practised by the Yogis of India, the aim being to cultivate "a condition of suppleness." The muscular exercises recommended by Mr. Gib are detailed in series, their exposition being illustrated by lengthy quotations from most of the classical writings on voice production. There is, indeed, little or nothing new in all this, and the book, small as it is, could have been made even smaller, as well as much more readable, if the quotations had been boiled down. Moreover, although the volume is largely made up of lectures delivered by Mr. Gib, there was surely no necessity to include in it allusions to the applause and votes of thanks which the author's remarks elicited from his audience.

The Life and Letters of Sir John Hall, M.D., K.C.B. By S. M. MITRA. With an Introduction by Rear-Admiral Sir R. M. BLOMFIELD, K.C.M.G. With portraits and illustrations. London: Longmans, Green, and Co. 1911. Pp. 560. Price 16*s.* net.—The subject of this biography, born in 1795, was a distinguished medical officer of the British Army, and formed a connecting link between what may be called ancient and modern times in the history of its Medical Service. He obtained his first appointment as hospital assistant a few days after Waterloo, and was placed on the half-pay list in 1857. During this long period he served in the West Indies, Gibraltar, South Africa, India, and the Crimea; he was principal medical officer in the Kaffir war of 1847, and of the British forces during the Crimean war. Throughout life he appears to have kept a record of his doings and experiences; from these materials and various other sources a connected story has been put together by Mr. Mitra, which affords entertaining reading in many places, and materials for history of more solid value in regard to military medical matters in the campaigns described. Perhaps some of the private letters need not have been reproduced at length in a volume intended for the general reader; but no one can fail to recognise that the subject of the biography was a man of warm feelings, cultivated tastes, of the highest character and ability, and entirely devoted to duty. The history of the Kaffir campaigns of 1847 and 1851 under Sir Harry Smith will be of interest to those who, in one capacity or another, served in the Boer war; but the chief importance of the book centres in the account of medical matters in the Crimea from 1854 to 1857. When the war broke out Dr. Hall was serving in India; he was appointed principal medical officer of the expedition, left Bombay in May, and arrived at Constantinople on June 17th. Obviously he had no opportunity of conferring with headquarter authorities at home, either military or medical, as to the plan of the campaign, its special circumstances, or the needs that would have to be provided for. The medical service of the army was in those days supposed to be chiefly concerned with the care of the wounded, and it was not realised that care for the health of the troops was of practically equal importance with the provision of food from a military point of view. Five chapters of this biography are devoted to a careful history of the campaign, supported by extracts from original documents. This is of permanent value, though

melancholy reading at this time of day. A very fair account is given of the difficulties of the medical department in 1854 and 1855—difficulties such as have recurred since, but which we hope and believe will not happen again. Referring to the magnificent work of Florence Nightingale and her staff, supported enthusiastically by public opinion and unlimited funds, Mr. Mitra observes: "Had the same means and facilities been placed at the disposal of the medical department of the army that were given to the civil establishment attached to it, they would have accomplished as much as, or more than, was carried into effect, at considerably less cost to the public, and with equal efficiency, so far as the real wants of the sick were concerned." Sir John Hall enjoyed much domestic happiness; after his retirement he sojourned on the continent, chiefly in Italy. He died in 1866 at Pisa. Lady Hall, who possessed great attractions and a charming personality, died in London in 1907 at the age of 91. The biography is rather discursive, but the collection and condensation of matter from many different sources make the book not only the record of an interesting and honourable career, but a valuable footnote to history of wider scope and importance. Sir R. M. Blomfield contributes a foreword, introducing Mr. Mitra to the reader; we cordially join in his congratulations to this talented Hindu gentleman "as being the successful chronicler of the career of an Englishman who officially connects Waterloo with the Crimea."

Transactions of the Ophthalmological Society of the United Kingdom. Vol. XXXI., Fasc. II. London: J. and A. Churchill. 1911. Price 4*s.* net.—Fasciculus II. of the Transactions of the Ophthalmological Society is above the average in interest and value. Besides cases of congenital ectopia lentis reported by Mr. J. Stroud Hosford, irideremia by Mr. H. B. Grimsdale, a peculiar granuloma of the retina by Dr. Frank G. Thomas and Mr. George Coats, it contains several exceptionally good papers. Particularly noteworthy is Mr. J. Herbert Fisher's paper on the Pituitary Body and Lesions of the Optic Chiasma. Nine cases are described exhaustively with diagrams of the fields of vision and in several cases skiagrams showing erosion of the dorsum sellæ turcicæ. The signs and symptoms of the disease are minutely recorded and are reviewed in the light of Cushing's experimental work on dogs. Particular interest attaches to the encouraging results obtained by treatment with Merck's tabloids of pituitary extract and Armour's extract of the anterior lobe of the pituitary body. Another paper of outstanding merit is that on the Histology of Papillœdema, by Mr. Leslie Paton and Dr. Gordon Holmes. The authors support the now generally accepted view that "choked disc" is an œdema and not a primary inflammatory condition. The fundamental cause is increased intracranial pressure, which is transmitted to the intra-vaginal space. Dr. A. Hill Griffith has added three cases of optic nerve tumour to the literature of this comparatively rare condition.

First-Aid Charts. By EDWARD C. IBOTSON, M.B., B.S. Lond. Bristol: John Wright and Sons, Limited; London: Simpkin, Marshall, Hamilton, and Kent, Limited. Four charts. Price 6*d.* each, or 1*s.* 6*d.* the set of four.—These first-aid charts are an attempt to reduce by tabular form to easy accessibility the main principles of first-aid treatment in emergencies. They are intended to be hung up to the public view in factories, mines, schools, colleges, nurseries, public institutions, and other similar places. The four charts cover respectively (1) Emergencies, accidents, and poisoning; (2) fractures, dislocations, and sprains; (3) wounds and hæmorrhage; and (4) insensibility or unconsciousness. They would probably be of service for ready reference to one who had already some training in the broad principles of first-aid, and to the student as a means of review.

JOURNALS AND MAGAZINES.

Jahreskurse für Ärztliche Fortbildung. (*Annual Post-graduate Review.*) Munich: Lehmann. Price 16 marks per annum.—The May number of this journal is devoted to Diseases of the Nervous System. Professor Edinger deals with the treatment of some of the common forms of nerve disorder. Insomnia in most of its varieties can be effectively relieved by a proper regulation of diet, baths, and exercise. In other cases hypnosis is of great value, although it is so seldom employed. Lastly, the rôle of drugs in the treatment of sleeplessness is fully considered. Headache is the next subject in this article, and the great importance of correctly ascertaining the cause before proceeding to treatment is insisted upon. In dealing with various functional disorders of the nervous system, the relative importance of a proper treatment of the body by diet and rest, and of the mind by suggestion, in different cases is carefully discussed. Again, in the treatment of neuralgia the point of first and greatest import is the distinction between cases of primary and secondary origin. In dealing with epilepsy, the various theories which relate this disease to metabolic disorders are briefly reviewed, and then a consideration is given to the signs of a localising character which indicate the possibility of surgical treatment. In the case of tabes and other degenerative cord lesions, prolonged rest is regarded as being very important in the early stages. Professor Vogt contributes a short article in which the psychological basis of nerve disorders is considered, while Professor Binswanger follows with a somewhat abstruse discussion of the principles of morbid psychology. In this an endeavour is made to relate the various forms of insanity to disorders of sensation, perception, and the association of ideas. Professor Berger deals with the treatment of organic nerve diseases, the chief subjects touched on being the rôle of salvarsan in cerebral syphilis, the indications for, and results of, surgical treatment of cerebral tumours and abscesses, the value of lumbar puncture in tuberculous meningitis, and the various toxic nerve disorders, such as those caused by morphia and alcohol.—The June number is devoted to the Diseases of Children. Professor Pfaundler discusses the various tendencies to disease or diatheses of childhood. That which used to be termed a scrofulous tendency is now termed an inflammatory diathesis. This is carefully described both in its latent and manifest stages as it affects the skin, mucous membranes, and nervous system. Such various conditions as eczema intertrigo, laryngitis, and pyloric spasm are regarded as being due to the same underlying cause. Next, the status thymo-lymphaticus is treated of, and its relation to cardiac disorder discussed. The third great disease tendency in childhood is termed the "arthritic diathesis." A consideration is given to the relationship existing between these different diathetic conditions to one another, and also between them and the disorders of the nervous system. Dr. Theodor Gött gives an excellent article on the convulsions of childhood. He divides them first into those which are functional and those which are symptomatic, and then deals separately with the convulsions occurring within the first two years and those of later childhood. Infantile tetany is regarded as due to a hyper-excitability of the nervous system, and the relation of this to rickets and other metabolic disorders is considered. There are irregular contractions not only of the voluntary muscles, but also of the visceral musculature, notably of the heart, intestine, and bladder. The symptomatic or organic convulsions of infancy must be very carefully distinguished from those which are merely functional, because the underlying cause can often be remedied if it is recognised in time. The chief causes are tetanus, septic diseases, pneumonia, meningitis, and

birth traumas. In discussing prognosis it is pointed out that less than a third of the children who suffer from "convulsions" ever develop into normal adults. The proper regulation of the diet is considered to be the most important point in the matter of treatment, and as regards drugs, chloral hydrate in 0·5 gramme doses given by the rectum is held to be the most valuable. The convulsions of childhood later than two years of age may be due to tetanus, idiopathic epilepsy, hydrocephalus, cerebral tumour, infantile paralysis, syphilis, or may arise reflexly from disease of the sensory organs, or from disorders of digestion and metabolism. These various forms are all briefly described.

The Yellow Fever Bureau Bulletin. No. 2. June, 1911.—Since the publication of the first number of this new periodical its editor, Sir Rubert Boyce, we regret to state, has died, and Dr. Harald Seidelin, formerly professor of pathology and bacteriology in the Medical School of Merida, Mexico, but now attached to the staff of the Liverpool School of Tropical Medicine, has been appointed to fill the post. The new editor brings to his task not only special scientific knowledge of the subject, but also practical experience of the disease. The first item in the present number of the *Bulletin* is a sympathetic obituary notice of Sir Rubert Boyce, to which is appended a reproduced photograph of the late editor. A series of reports of recent occurrences of yellow fever in West Africa and in the West Indies are then given, after which Dr. Seidelin contributes a very exhaustive original article extending to some 19 pages on the Treatment of Yellow Fever Cases. This is followed by some reviews of lately published books or pamphlets which relate to the disease in one or another of its various aspects. The current *Bulletin*, like its predecessor, concludes with a bibliography. This second number fully maintains the standard set up by the first, and in our opinion it must prove of great interest to all who are concerned in the diagnosis, treatment, or prevention of yellow fever.

Quarterly Journal of Microscopical Science. Edited by Sir E. RAY LANKESTER, K.C.B., F.R.S., with the coöperation of ADAM SEDGWICK, M.A., F.R.S., SYDNEY J. HICKSON, M.A., F.R.S., E. A. MINCHIN, M.A., F.R.S., and GILBERT C. BOURNE, M.A., F.R.S. August, 1911. London: J. and A. Churchill. Price 10*s.* net.—Mr. W. E. Agar, D.Sc., considers the spermatogenesis of Lepidosiren paradoxa from material obtained during an expedition to the swamps of the Paraguayan chaco, undertaken primarily for the purpose. Mr. Geoffrey Smith continues his studies in the experimental analysis of sex, by a consideration of the cause of the fluctuations in growth of the fowl's comb. In this he essays to demonstrate that correspondence of the comb increase with egg-laying is invariable, that these rapid fluctuations are characteristic of hen birds, and that they are due to a fatty infiltration of the central core of the comb taking place just before egg-laying commences. At this time the blood becomes charged with the fatty material conveyed to the ovary for the formation of yelk, the excess of this being deposited in the comb. Mr. C. H. Martin and Miss Muriel Robertson publish some further observations on the cæcal parasites of fowls with some reference to the rectal fauna of other vertebrates. The authors state that in recent years there seems to have been a tendency to regard the life-cycle of parasitic flagellates as a subject on which the most hazardous speculations can be put forward, and these, unfortunately, crystallise only too soon into the well-known protozoon life-cycles of the zoological text-book. Though they do not feel justified in putting forward a complete life-cycle in the case of any one of the forms they describe, they consider themselves right in publishing the results obtained, because (1) their preparations were always made from the wall of the cavity containing the parasite and not simply from the content of the cavity, so that they have obtained a more complete series of division of the active forms than earlier workers, and have also got an interesting series of new stages; and (2) owing to the ease with which it is possible to obtain newly hatched chicks and keep them free from all animal parasites, they have obtained really valuable data as to the course run by new infections of these forms. They have obtained evidence which they believe justifies them in dividing the animal parasites found in the cæca of fowls into the following species:—(1) Chilomastix gallinarum (*sp. nov.*); (2) Trichomonas gallinarum (*sp. nov.*); (3) Trichomonas eberthi (*sp. nov.*); (4) Trichomastix gallinarum (*sp. nov.*). They describe their technique, and discuss each of the four forms named. Mr. Charles L. Boulenger discusses some points in the anatomy and bud-formation of Limnocnida tanganicæ (African fresh-water jelly fish).

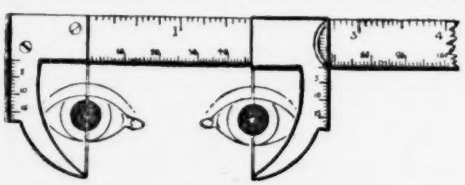
The Quarterly Journal of Medicine. Edited by WILLIAM OSLER, J. ROSE BRADFORD, A. E. GARROD, R. HUTCHISON, H. D. ROLLESTON, and W. HALE WHITE. Vol. IV., No. 16. July, 1911. Oxford: At the Clarendon Press. Subscription price 25*s.* per annum; single numbers 8*s.* 6*d.* each net.—In this number, under the title Some Points in Relation to the Etiology of Auricular Fibrillation, Dr. C. E. Lea describes his investigations, which lead him to the conclusions that auricular fibrillation can be regarded as a definite clinical entity, which in 56·6 per cent. of cases is preceded by rheumatic or choreic disease, mitral stenosis being the most frequent lesion. In non-rheumatic cases auricular fibrillation is found in 43·4 per cent., the most frequent lesion being cardio- or arterio-sclerosis. The age incidence of mitral valve disease, with or without preceding rheumatism, was 38·2 years; of cardiac sclerosis 53·9 in rheumatic, 56·9 in non-rheumatic cases. Females were more frequently subject to valvular disease, males to cardio- or arterio-sclerosis. Of all cases of auricular fibrillation, 32·8 per cent. occurred in cardio-sclerosis, 31·3 per cent. in mitral stenosis, and 23·8 per cent. in cardiac dilatation. Influenza occurred in 39·3 per cent. of non-rheumatic cases. Electro-cardiagraphic records confirm the polygraphic records in all cases examined. Dr. J. D. Windle, in considering the Relationship of the Heart Beat to Pulsus Alternans, concludes that the observations he details, while they lend some support to the view of Hering that in alternate heart beat a partial systole of the ventricle occurs, also show that in alternating pulse it is not always possible in clinical cases to determine the fact of alternating heart action. Dr. P. N. Panton and Dr. H. L. Tidy, in a paper on the Analysis of the Gastric Contents, deal with the routine examination of test meals in a series of cases, and make an inquiry into the various methods of examining test meals and the meaning of the results obtained. They conclude, among other things, that all the methods commonly in vogue are approximately accurate when the free acidity is either normal or above normal, and inaccurate when it is low. The Prout-Winter method, however, they consider inaccurate in any circumstances. They do not agree that the estimation of so-called "active" hydrochloric acid according to Willcox's method is either accurate or profitable. Phosphates introduce a fallacy common to all the methods they have investigated. They suggest that the phosphates are secreted into the cavity of the stomach when the gastric mucous membrane fails to elaborate free hydrochloric acid from the mixture of phosphates and chlorides brought to it from the blood. They consider Günzberg's reaction and the estimation of total and dimethyl acidity to be as accurate as more elaborate methods, and to supply all the assistance and information which can be reliably obtained from examination of the gastric contents. The Systolic Pressure at

Different Points of the Circulation in the Child and the Adult is compared by Dr. Leonard Findlay, who concludes that during childhood and youth the systolic arterial pressure is fairly uniform at different points of the circulation. In adult life the peripheral systolic pressure is lower than the central, and the difference between them increases with age. Finally, the difference greater than normal between the central and peripheral systolic pressures in cases of hypertension, from disease or experimentally produced, supports the idea that the behaviour of the pressure and its variations depend upon changes in the elasticity of the vessel wall. Dr. Peter F. Holst and Dr. A. H. Monrad-Krohn report two cases as a contribution to the study of the function of the *A.-V.* bundle. Dr. W. Hale White reports five cases of Essential Renal Hæmaturia, which have been followed for much longer periods than almost all other published cases, with the moral that the outlook is good and that the disease does no harm apart from the loss of blood. In a critical review of the Use of Tuberculin in So-called Tuberculous Glands, Dr. George E. Waugh concludes that any estimate of the value of injections of tuberculin in the treatment of enlarged glands must be invalidated by the fact that no proof that the glands were tuberculous can be offered until the glands have been subjected to operation. The most important factor in the treatment of chronic glandular enlargement with a view to the avoidance of extensive operative interference is the complete elimination of all primary foci of infection. The use of the guillotine in the tonsils is one of the most serious causes of failure in the treatment of enlarged glands. Wright's bacillary emulsion has not been proved to be of any value, though it is probably harmless. In enlarged glands which on removal proved to be tuberculous, thickening of the operation scar frequently occurred, but disappeared under a course of injections of tuberculin.

New Inventions.

NEW OPHTHALMIC CALIPERS.

WITH the increasing necessity for the correct centring of spectacles there comes the demand for a rapid and accurate measurement of the ocular base line. It is no longer found sufficient, as in former days, to take a rough measurement of the interpupillary distance. The instrument shown in the accompanying illustration was devised for the purpose of



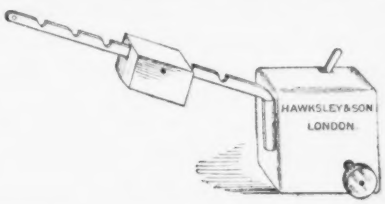
measuring the base line in working with the registering form of diaphragm test, and the new calipers have proved, after a year's work, to give this measurement with the greatest expedition and with an accuracy that meets the stringent conditions of that test for binocular vision. In experimental forms these calipers were exhibited to the Ophthalmological Society in 1909 and 1910; they are now made by Messrs. G. Culver, Limited. The raw material used is steel, and the workmanship is excellent. Briefly the method of usage is as follows. The patient faces a distant light, either a window or lamp, and looks at it with both eyes; the images of the light are seen upon the corneæ and mark the visual axes. The surgeon faces the patient at arm's length, places the rule upon the patient's brows, and sights the fixed wire over the image on the patient's right eye. Then the other wire is slid over the image on the left cornea and carefully sighted. The surgeon sights the patient's right eye with his own left eye and *vice versâ*. In measuring the base line for near vision the procedure is the same, but the light is put over the surgeon's head at the requisite distance and the patient looks at it. The vertical scales on the jaws are for the purpose of measuring the vertical displacement of lenses for the correction of hyperphoria. The trial lenses are tilted until the defect as measured with the scale test card in the diaphragm test is corrected, the rule is held horizontally across the patient's brows, and the depression of the lens of one side as compared with the other read off.

N. BISHOP HARMAN, F.R.C.S. Eng.

Harley-street, W.

A BALANCE-WEIGHT FOR THE CLINICAL POLYGRAPH.

PROBABLY not a few beginners with the clinical polygraph have found among their other troubles a difficulty in keeping the spring of the sphygmograph in contact with the radial artery when the "arm" carrying the tambour for collecting the pulsations from the neck is placed *in situ*. The weight of this is apt, more especially in the case of slender wrists, to tilt the sphygmograph outwards, and thus to remove the instrument from the artery and to cause the loss of the radial tracing. If, in order to avoid such a result, the wrist-strap of the sphygmograph is drawn more tightly, the consequences are unpleasant for the patient, and the undue pressure thus occasioned may, once again, diminish or suppress the arterial excursion. After various attempts to get rid of this annoyance I have at last hit upon a simple mechanical contrivance which may perhaps



be of service to other workers. The principle of it is the provision of a weight in opposition to the force or leverage exercised by the "neck tambour" and by the "arm" which carries this tambour, and this in such a fashion as to allow graduation of the balancing or resisting force without altering the amount of pressure exerted on the radial artery by the spring and pad of the sphygmograph. To secure these ends a socket is fixed on that side of the box containing the clockwork of the sphygmograph opposite to the one carrying the tambour "arm," and into this socket is fitted an angled rod carrying a moveable weight and notched so as to allow the weight to be temporarily adjusted at different points, the arrangement being, in short, similar to a steelyard. If after the sphygmograph has been attached to the wrist the tambour arm and the balance weight are placed in position the whole apparatus remains perfectly steady, and thus the inscription of the two tracings is much facilitated. The balance-weight is readily added to the present pattern of Dr. Mackenzie's clinical polygraph, and is not without value, at least in occasional instances, in the use of the sphygmograph pure and simple. It has been made for me by Hawksley and Son, 357, Oxford-street, W.

Harley-street, W. C. O. HAWTHORNE, M.D. Glasg.

INTERNATIONAL MONUMENT TO CESARE LOMBROSO.—The central committee in Rome charged with the carrying out of this undertaking has just received the sum of £62 from the Scottish committee organised with the same object under the presidency of Lord Guthrie, one of the judges of the Court of Session. The central committee also announces contributions to the movement from continental committees whose interest in the founder of the science of "criminal anthropology" seems proportioned to the recrudescence of "hooliganism," represented abroad by the "apaches" of France, the "teppisti" of Italy, and the "Mano Nera" of the United States.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 9, 1911.

Inebriety and Alcoholism.

LEGISLATIVE enactments, like individual enterprises, are apt occasionally to produce effects so different in their nature and influence from what their authors had promised and expected that it may be a matter of difficulty to recognise the original intention in the final result. The Inebriates Act of 1898 is a very striking instance of this sort of miscalculation. The object of the Act, as was generally understood when it was placed on the statute book, was to give effect to the view, which had been strongly voiced by medical opinion, that the pathological factor in inebriety ought to be considered in the treatment of inebriate offenders. Instead of regarding intemperance merely as a vice, which when it led to antisocial acts was if anything an aggravation of their iniquity and as such entailed a proportionately heavier penalty, the law now set itself to recognise that inebriety might be due to a condition of disease, the existence of which in a delinquent should take him out of the category of ordinary criminals and should bring him under curative treatment rather than penal discipline. Unfortunately, however, in framing the measure which was to embody this very sound view the legislature thought fit to adopt a plan which appears to have been inspired by totally different and quite incompatible principles. Though proceeding, as we have seen, from the assumption that the condition to be dealt with was one of disease, it rigorously reserved to the administrators of the law not only the prescription of the treatment but also the making of the diagnosis. So strictly, indeed, has this singular system been adhered to that, though a medical certificate is required as part of the machinery for committal to an inebriate reformatory, the official form on which it has to be furnished omits all reference to the patient's inebriety; the certifying physician is invited to express an opinion as to the intemperance of the patient's grandmother, but the intemperance of the patient does not concern him and is wholly a matter for the superior diagnostic skill of the police. It was hardly to be anticipated that the results attained by these very novel methods would be of a kind to encourage further experiments on similar lines. And that they are most distinctly not of such a kind is made abundantly clear in the very interesting but rather pessimistic report of Dr. R. W. BRANTHWAITE on the working of the Inebriates Acts (1879 to 1900) during the year 1909, which has just been published.

Dr. BRANTHWAITE, whose annual reports are usually distinguished by a freshness of idea and a careful style not too common in blue-books, has devoted the greater part of his latest volume to a general disquisition on the nature of inebriety and the characteristics of the inebriate. In this connexion, of course, it has to be remembered that these terms are used in a somewhat special sense determined by the very peculiar legislation which has provided the material for Dr. BRANTHWAITE'S words. Thus, what we are to understand by an inebriate in this report is simply an inmate of an inebriate reformatory, and inebriety in the same way can hardly be defined more exactly than as a liability to become such an inmate. It will be seen from this that Dr. BRANTHWAITE'S description of the condition in question and of its victims suffers under the disadvantage that he has had to seek out biological and psychological characters in a category of individuals defined by a purely legal criterion, and a very rough-and-ready one at that. His task, in fact, is somewhat like that of a naturalist who should be called on to furnish a scientific description of the horse, the horse being first defined inclusively and exclusively as any animal found in a stable. It is necessary to point this out, because Dr. BRANTHWAITE does not appear to have indicated it with quite sufficient clearness, and the unwary reader might easily fall into the error of supposing that the report purported to give an account of alcoholism and alcoholic subjects in the medical sense, and not simply a description of the sort of individuals who get committed to inebriate reformatories under the existing law. Such a misapprehension of its real purport would be the more regrettable because it would interfere with the due appreciation of the lesson which this valuable report can teach regarding the defects and limitations of the Inebriates Act of 1898. For it may be safely affirmed that the fact most clearly brought out by Dr. BRANTHWAITE'S inquiry—and the fact, we may add, of most practical importance—is the complete failure of that Act to touch even the fringe of the problem of chronic alcoholism. The evidences of this are manifold. In the first place, we have the fact that of the total number of "inebriates" committed to reformatories during the last ten years—3309 in all—only 542, or 16 per cent., were men, although, as is well known, the incidence of chronic alcoholism, as measured, for instance, by the mortality from delirium tremens and other manifestations of chronic intoxication, is far higher in men than in women. Again, we observe that in only 9 per cent. of the reformatory patients is even a probable history of delirium tremens forthcoming, and this despite the inclusion of several doubtful cases. Further, we learn that it is rare to find any evidence of permanent tissue change resulting from alcoholic excess in these individuals; and, again, that they display a "conspicuous absence of disease of the intestinal tract, disease of the kidneys, and gout."

These latter facts lead Dr. BRANTHWAITE to express some doubt as to the soundness of current medical teaching which attributes many organic and functional disorders to the action of alcohol taken in excess, but unless we are to adopt the same attitude of scepticism with regard to the general belief in the alcoholic origin of

delirium tremens, it seems more natural to suppose that the reason why the inmates of reformatories are relatively free from such disorders and have so rarely suffered from delirium tremens is simply that although they are inmates of reformatories they are not chronic alcoholics. And that this is the correct interpretation is placed beyond doubt by a fact to which Dr. BRANTHWAITE has called attention in previous reports and which he again emphasises now—namely, that some 65 per cent. of these so-called inebriates are of obviously defective mental capacity, and the remaining 35 per cent. are to be described as normal, "not because defect is absent, but because it is less marked." We are dealing, in short, in these cases with individuals who drink—when they do drink—because they are diseased, and not with individuals who are diseased because they drink. Cases of the latter sort—cases, that is to say, of chronic alcoholism—do not find their way to inebriate reformatories; and inasmuch as these are the cases which in their early stage are curable, and as, moreover, they are the source of the major part of alcoholic crime, the failure to reach them is the real origin of most of the adverse criticism to which the Inebriates Act has been subjected by recent observers.

It might do much to diminish the prejudice against reformatories for inebriates, which clearly exists, and accounts for the condition of things revealed in Dr. BRANTHWAITE'S report, if we adopted a more precise phraseology and ceased to use such terms as inebriety and alcoholism as applying indifferently, on the one hand, to cases of chronic poisoning in relatively normal individuals, drinking under the influence of environmental and industrial conditions, and, on the other hand, to cases of congenital mental deficiency in which a proneness to take alcohol and an intolerance of its action are indications of a general cerebral fault. Certainly the recognition of a distinction between these classes would clarify our ideas as to the treatment of each one of them. The denomination of "alcoholic" might with advantage be restricted to the former, and that of "inebriate" to the latter category—if, indeed, there is any good reason for differentiating in the mass of the feeble-minded a special group under this distinctive heading. Inasmuch, however, as these so-called inebriates do not seem to differ in any important characteristics from the rest of the mentally defective, and as it is not suggested that they require, by reason of their supposed inebriety, any different system of treatment and discipline, the need for such a differentiation is not apparent. It is, in fact, more likely that by introducing artificial divisions of this sort we should only promote the confusion of ideas and multiply the practical difficulties which stand in the way of an effective solution of the problem of the feeble-minded. For the moment, at all events, the most important conclusion to be drawn from Dr. BRANTHWAITE'S interesting review of his official work is that we are still as far as we were before 1898 from any satisfactory system of dealing with curable cases of alcoholism. Such cases, in which institutional treatment of a sufficiently continuous character might prevent the degradation of a useful worker into a burden on society and a danger to its security, are not, it seems, amenable to the Inebriates Act.

The Nutritive Value of Bread.

THE report recently presented to the Local Government Board by Dr. J. M. HAMILL on the nutritive value of bread made from different varieties of wheat flour is a very careful review of all the work that has been done upon the subject from earlier times down to the present date. In spite, however, of this admirable effort to collect evidence on the controversial matters raised in the so-called "standard bread" movement, there still remain, in Dr. HAMILL'S own words, "numerous points of uncertainty" which require settlement, while he further observes that "any inferences which may now be drawn from observed facts are necessarily liable to require considerable modification as knowledge of the physiology and chemistry of nutrition advances." This is a thoroughly wise reservation. Nevertheless, Dr. HAMILL has elucidated many of the questions at issue, and the unprejudiced and painstaking way in which he has collected the materials in his report makes future work easier. His observations have the merit of logic and good sense. Much analytical work done at the laboratory of the Local Government Board by Dr. G. W. MONIER-WILLIAMS adds value to the report.

The differences in nature and in nutritive value between breads made from varying classes of flour are not of much importance to the average adult with whom bread is only one out of many varied constituents of the dietary. A diet which consists principally of bread, from whatever grade of flour it may be made, is not in accordance with the human needs. But in those unfortunate cases in which practically bread, and bread alone, provides the daily sustenance, there would clearly be an advantage in the use of bread made from flour of the "entire" wheat class, since such flour secures a somewhat larger quantity of mineral matter and of suitably combined phosphorus and other substances, as yet unknown, which may prove to be factors of importance in the processes of nutrition. It is true, however, that bread is our chief source of starchy food, and even the person who is free to choose a mixed dietary eats it as a necessary accompaniment to, or vehicle for, the proteins and fats which make up his meal. But whether we are considering those with whom bread is the principal food, or only those to whose meals bread is a valuable accessory, there is a psychological aspect which deserves more attention than it has received. What better meal is there, or what meal that responds more closely to the physiological requirements of the body than bread, butter, and cheese? And how greatly is its enjoyment added to by bread with the unmistakeable taste that we call "nutty"? There is a complete harmony existing between the flavour of good cheese and the flavour of good wheaten bread. But the bread-and-cheese meal, so palatable when the constituents have individual and irreproachable characters, while it becomes nasty if the cheese be nasty, is at once uninteresting and unappetising should the bread be conspicuously without flavour. The true bread flavour makes all the difference between our enjoying and not enjoying our meal, and, as is well known, when the enjoyment of food is eliminated real food value is greatly discounted. The simple and scientific meal of bread, butter, and cheese can be completely spoilt by indifferent bread, even though

the other ingredients are satisfactory. It follows that, regarding bread as an integral part of a dietary, it should still have appetising qualities.

The report contains reference to physiological experiments bearing upon the influence on nutrition of certain constituents of "standard" flour which are absent in white flour. Experiments on pigeons and rats are quoted showing that both thrive better when fed upon standard flour than upon white flour. In the case of the pigeons the birds fed only upon white bread lost weight and suffered from peripheral neuritis, though the addition of yeast to the diet was sufficient to restore them to a healthy condition. We are not prepared with an explanation of this fact. In this connnexion Dr. HAMILL refers, as was inevitable, to the work which has been done on the etiology of beri-beri. A diet consisting of rice from which the skin or cuticle has been removed may give rise to beri-beri, a condition which manifests itself by polyneuritis and other symptoms. It has been shown that polyneuritis analogous to that which occurs in beri-beri can be produced by rice which has been deprived of its cuticle by milling. Moreover, if the "offal" which has been removed from rice, and which amounts to 10 per cent. of the grain, be returned to the rice no polyneuritis occurs. SCHAUMANN concludes that a deficiency of certain organic phosphorus compounds in the grain deprived of its skin has profoundly modified metabolism. Considerations of this kind show the necessity for further work on the subject of the nutritive value of bread, and we may be sure that it will soon be done. The value of Dr. HAMILL'S report lies in the fact that he has drawn attention to a number of important but undeveloped chemico-physiological questions in regard to our commonest and most familiar article of food. The time and energy which he has devoted to his task have been fruitfully spent. He has done much towards laying bare what are the actual facts of the case, and has furnished arguments of the most urgent kind for further research.

The Improvements in the Naval Medical Service.

IN the Students' Number of THE LANCET, published on August 26th, under the heading of the Naval Medical Service, we were able to indicate a certain number of changes in the organisation of the Service which were immediately to take place. These changes were announced in detail last week in a Circular Letter issued by the Admiralty under the nominal date of August 11th. The net result of the new regulations for the Service will be, we think, more satisfactory to those belonging to the Service than could be gleaned from the announcement in the *Gazette* of August 18th, and the recruiting of officers for the Service should therefore be easier. For the pay in every grade has been improved, while the particular care that is being paid to post-graduate instruction will ensure for the Service such good clinical and scientific instruction that any members of it, who may choose to avail themselves of the opportunities of leaving the Service for civilian practice, will find themselves perfectly well equipped in many directions. This is particularly the case as for the future the second post-graduate course, taken after 14 years' service, will in some degree permit the study of special subjects at the officer's own choice. The first part of the Circular Letter enumerates the alterations in pay and allowances of the Service which have already been published in THE LANCET. The salaries of the Medical Department of the Admiralty are advanced, so that the emoluments of the Medical Director-General, the Deputy Director-General, and the Assistants are all slightly raised. The increase of pay granted in any particular rank, however, is not of so much importance as the more considerable increase of pay which attends each successive step upwards towards and in the more important appointments. This seems to us a reasonable recognition of the fact that the more experienced an officer is the more highly he should be paid. The Director-General can now reward officers for good work as he never could before, and junior officers have far better prospects than their predecessors had, and far more incentive to keep their knowledge up to a high standard.

The two most important alterations effected in the Service by the new regulations are undoubtedly the establishment of a naval medical school for the training and post-graduate instruction of the officers, and the recognition of the medical officer of the senior flagship of a fleet as the Principal Medical Officer of that fleet. The first of these alterations was well known to be in contemplation, and the second is one for the justice of which there has been much contention in our columns. As was expected, the new naval medical school will be established at the Royal Naval College at Greenwich in close proximity to the Dreadnought Seamen's Hospital and the London School of Tropical Medicine, and in a position, as the Circular Letter says, to carry out its educational and scientific work in close connexion with those establishments. When it becomes one of the medical schools of London it will be in touch with all the schools attached to the metropolitan hospitals and with the Army Medical School at Millbank, while there are already in existence at Greenwich many of the laboratories that will be required for the new work. Additional laboratories for medical research are to be provided in the college buildings and furnished with the necessary equipment and scientific apparatus. The work now done at Haslar will not be discontinued, although a proportion of that work and the appliances in connexion with it will necessarily be transferred to Greenwich. At the Naval Medical School at Greenwich one Fleet-Surgeon with a special allowance of £150 a year will be appointed as Professor of Bacteriology and Clinical Pathology, and another Fleet-Surgeon, with the same special allowance, will be appointed as Professor of Hygiene. The latter officer will reside in the college and be in charge of the studies of the medical officers undergoing their course at Greenwich. A medical officer will also be retained at Haslar for the instruction of Acting Surgeons, and he, too, will receive, as he does at present, an allowance of £150 per annum for this duty. The new school at Greenwich will be utilised as soon as it is open for the instruction of Acting Surgeons immediately after their entrance to the Service. The course of instruction of these officers being now lengthened from

four to six months, the first two months of the course will be passed at Greenwich, the period being devoted to the study of tropical medicine, bacteriology, clinical pathology, hygiene, and skiagraphy; the remaining four months will be passed at Haslar, as at present. It is unnecessary to point out to our readers how valuable a school of instruction and research in the vicinity of London for the Naval Medical Service must prove to be. We hope that its institution and the improved post-graduate courses will increase the efficiency of the Service, while the better pay should attract recruits.

The recognition of the medical officer of the senior flagship of a fleet as the Principal Medical Officer of that fleet is made in the following terms:—

He will be appointed on the staff of the Commander-in-Chief and wear an aiguillette. He will act as the Commander-in-Chief's principal adviser on all medical and sanitary matters connected with the Fleet, and it will be his province to report to the Admiralty periodically upon the arrangements for the treatment of the sick, the sanitary conditions, and the state of the medical appliances in the various ships; also to supervise and report upon the arrangements for the treatment and transport of wounded, the instruction given in first aid, and other matters as he may be directed. He will have direct access to the Commander-in-Chief, and be in a position to propose for his consideration any measures likely to conduce to the efficiency of the medical organisation of the Fleet, and he will be directly responsible to the Commander-in-Chief for keeping him informed on these matters generally.

This is not only an acknowledgment of the responsible and dignified position held by the officer who is to be regarded as the Principal Medical Officer of the Fleet; it is a direct compliment to the official and scientific standing of medicine, and an alteration in the regulations which must materially improve the health and medical treatment of the seamen of the fleets. As such we welcome the reform warmly.

Annotations.

"Ne quid nimis."

THE HOUSING OF HOMELESS WOMEN.

THE National Association of Women's Lodging Houses, which was instituted on Feb. 24th, 1909, and has its headquarters at 4, Tavistock-square, London, has recently issued the report[1] of the proceedings of its Third National Conference. The object of the association is to link together societies and individuals interested in shelters for women and girls, to disseminate information and promote legislation on the subject, and to institute local committees. It was announced that the deputation, instructed by resolution of the preceding conference to wait on the Housing Committee of the London County Council, presented to that body on Feb. 15th of this year a statement on the need for providing proper accommodation for women, and suggesting the provision of houses, each to accommodate about 100 women, in the following selected areas: Tabard-street or Newington, Drury-lane, King's Cross, Hoxton, Notting Dale, and Pimlico or Vauxhall. The deputation was well received, and a subcommittee of the London County Council was formed to inquire into the whole question of provision of suitable accommodation for women in London. The Congress was participated in by the Associated Societies for the Protection of Women and Girls, the Federation of Working Girls' Clubs, the Mansion House Council on Health and Housing, the National Council of Public Morals, the National Housing and Town Planning Council, the National Union of Women Workers, the National Vigilance Association, the Travellers' Aid Society, the Women's Industrial Council, and the Young Women's Christian Association. The Lord Mayor having opened the Congress, the Duchess of Marlborough took the chair and delivered a thoughtful presidential address, in which she met an objection often raised—that lodging houses for women would tend to destroy home life—by pointing out that the woman worker, for whose needs provision was sought, was already actually or practically homeless. "Those who speak so eloquently," she said, "against what they term the breaking-up of the home, have perhaps not always seen the home they profess the provision of decent lodgings for girls would destroy." A paper on the Need for Women's Lodging Houses, by Mrs. Mary Higgs (read, in the unavoidable absence of the author through illness, by Miss Taylor), pointed out that more women than girls seem to feel the need of such provision, and endorsed very strongly a suggestion by Miss Alston that lists should be compiled of safe lodging homes, with information as to whether they are restricted to a certain class or age, or are open for women of all ages, or will receive girls in urgent need of shelter. Mrs. Higgs is optimistically convinced that through the provision of such accommodation the problems of womanhood, the sweated worker, the deserted wife, the widow, the feeble-minded, and the inebriate will one by one be met. The point to be aimed at, according to Dr. J. F. J. Sykes, medical officer of health of St. Pancras, is proper provision for privacy and modesty, with homely supervision, but without over-regulation—a point in which we find ourselves in hearty accord with him. A brief summary of the powers of local authorities to provide municipal dwellings for women was given by Alderman W. Thompson, in which he showed that local authorities may acquire through the Local Government Board not only land, but also money to enable them to erect lodging houses or hostels, flats or cottages, to supply them with the necessary fittings, and to convert existing buildings into lodging houses. Mrs. Bramwell Booth, however, was antagonistic to the Government or municipal institutions for single women, being convinced that they constitute a real menace to the home, and she pleaded for increased opportunity and greater support for private enterprise. She described what one private hostel for women, established and maintained by the Salvation Army, had accomplished, and argued that to offer human beings provision for their physical and temporal need alone was to treat them no better than horses were treated. Mrs. Hopkinson, discussing the housing of educated girls and women earning their living in London, pointed to the results attained by Brabazon House, Limited, as showing that financial as well as other success is possible under the initial conditions of care in construction and expenditure, a capable architect, and a well-chosen small board of directors. Interesting papers were also read by Mrs. Charles Morrison, Miss Margaret Ashton, M.A., and Mrs. MacKinnon. That there is need of provision for homeless women and girls is hardly likely to be disputed; but, as in regard to other crying needs arising out of our present social system, considerable statesmanship is essential if the need is to be satisfactorily dealt with without entailing other, and, perhaps, equally serious, evils.

[1] Report of the Proceedings of the National Conference on Lodging-house Accommodation for Women, held in Guildhall, London, on Wednesday, May 17th, 1911, under the Presidency of the Right Honourable the Lord Mayor and Her Grace the Duchess of Marlborough. London: P. S. King and Co. 1911. Pp. 64. Price 6d. net; post free, 7d.

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UNIVERSITY OF ST. ANDREWS: ITS QUINCENTENARY.

CENTENARIES, a laudable innovation in the nineteenth century, are in danger of becoming an "institution" in the twentieth. Certainly they seem, oftener than not, to be celebrated on very slight provocation. Scotland has of late years made herself conspicuous by the number of these commemorative functions, of which, however, the more justifiable have been those of her seats of learning. In 1884 she celebrated the tercentenary of her post-Reformation University at Edinburgh; in 1901 the "ninth jubilee" of Edinburgh's pre-Reformation sister at Glasgow; in 1908 the quater-centenary of her seat of learning, also pre-Reformation, at Aberdeen; and now she is commemorating the 500th birthday of the eldest of the four, her "Mater Studiorum" at St. Andrews, founded, like the two last-named, by Papal bull. Ungrateful indeed would she be if she showed herself insensible to the obligations under which those foundations have laid her, owing to them as she does the opportunities and the discipline which have enabled her sons to compete in the "struggle for existence" with the more highly favoured of their contemporaries; compete, moreover, not unsuccessfully, while receiving in return a refinement and a distinction not to be gained in the somewhat rugged conditions into which they were born. Poverty, so far from being the "curse" it is considered to be, is, to a really masculine people, a distinct blessing, fraught with incentives to work, to self-reliance, to honourable ambition. "With the bayonet of necessity at her back," as one of her typical sons expressed it, Scotland has faced difficulties and stormed positions from which, without such *vis a tergo*, she would have shrunk, and though many have fallen in the struggle, the survivors have been numerous enough to encourage relays of recruits, pressing forward under the rubric—

"Nil mortalibus arduum est."

Just four centuries ago, her ecclesiastics and her *noblesse*, the two dominant forces in her kingdom, were so evenly balanced that neither could afford to give a point to the other, while the Crown, as *tertius gaudens*, played them off against each other. On Sept. 9th, 1513, she sustained, at the hands of England, one of her most disastrous defeats on Flodden Field, her king and wellnigh all her nobility among the slain. What happened? The Church, relieved of the check imposed on her by the aristocracy, plunged into excesses which so alienated the people that when the Lutheran wave swept over Britain it found Scotland prepared to meet it more than half-way. A clean sweep was made of the Papal authority and the Papal religion. The people, left to themselves—the *noblesse* being represented by minors, when not wiped out—were thrown back on their own resources, and through their leader, John Knox, greater as a statesman than as an ecclesiastic, secured this advantage, to wit, that wherever there was a parish church there must be a parish school. From this institution Scotsmen are prone to date their rise in the world, and not without reason, preparing the humblest of their sons for the professions at the essentially democratic seats of learning which the national poverty could provide, and thus tapping a social stratum which, under more favourable conditions, would have lain inert. Poverty again, before the union with England in 1707, sent the professionally-minded Scot to the Continental schools, particularly those of Holland, and prepared them for the practice of the most cosmopolitan of liberal callings—that of medicine. An impulse was thus given to their study of the healing art and its preparatory "institutes" which made their native schools, particularly that of Edinburgh, the resort, even of Englishmen, for the continental discipline and methods not to be had at home—a fact which explains the prosperity of those schools even from a financial point of view, till even St. Andrews, remote from opportunity for clinical observation and research, used her character of "University" to grant degrees in medicine to outsiders—a step in contrast to her otherwise unmercenary record. What happened? At first the Royal Commission which recognised this "departure" limited to the number of ten in any one year the duly qualified practitioners to whom the St. Andrews degree might be given, at the same time supplementing the local professoriate with examiners from other schools. This restriction was *motivé* as a check on the multiplication of graduates, not connected with St. Andrews, but drawn mainly from England and Ireland, a multiplication which raised the University capital from £2278 in 1834 to £15,300 in 1868. In 1862 alone as many as 604 received the *summi in medicinâ honores!* This abuse called loudly for reform, and the Commissioners of 1889 ordained that the University could grant no degrees in medicine except to her own *alumni*. From this enactment dates the enormous development of the medical school at Dundee, now almost continuous with St. Andrews by the Tay bridge—another proof of Scottish power to bow to circumstances and rise to new ideals. This development will take rank with any of the more creditable episodes in the history of St. Andrews and reveals a spirit and an initiative of the best augury for her future.

AN EXPOSURE OF CONTRACT PRACTICE.

IN the *National Review* for August there appeared an interesting criticism of the National Insurance Bill from the pen of Mr. Adolphe Smith, who is well able to speak with authority on the evils of the contract system of medical practice, for it is an open secret that he carried out the first-hand investigations whose results were printed in THE LANCET and republished under the title of "The Battle of the Clubs." Mr. Smith not only knows his subject but he has also the gift of apt and lucid exposition. He feels very strongly that contract practice, which he describes as "the tallyman system applied to professional services," is inherently bad, that friendly society control of medical practitioners has been degrading, and that a national scheme founded on the past charity of the medical profession must inevitably break down. All this he sets forth in telling phrases which no educated layman can fail to grasp. His historical review of the situation is particularly impressive. He traces back the contract system to "the great wave of humanitarian feeling which swept Europe in the forties," and shows how the penny-a-week method of payment, which was acquiesced in at first by medical men out of charity as a means of relieving immediate local distress, steadily developed and hardened until the charitable aspect of the matter became forgotten and the prosperous artisan club member came to believe that this sum was adequate payment for professional services. The author aims directly at the public ear, and he puts his case with so much force and point that we hope his article will be very widely read, though it was written before the intention of the Government was known not to vest the distribution of medical benefits in the friendly societies. Mr. Smith contends with great justice that the contract system must be even more harmful to the patients than to their medical attendants. It is a pity, he says, that there are some practitioners who have made quite a good thing out of it; instead of denying that a penny a week could possibly pay for professional services and drugs, many of them set to work to organise their practices in such a manner as to make it pay. Mr. Smith has seen contract medical

practice at close quarters in all its forms, at its best and at its worst, and he can find little or no good in it. Contract work in practice, he maintains, is quantity instead of quality; the friendly societies and all such medical aid organisations are the natural economic antagonists of the medical profession; and any scheme of national insurance which sought to perpetuate and expand the club system would have been utterly unsound. The author strengthens his arguments by illustrations from abroad; he shows how in all industrial countries there is an inherent hostility between the medical profession and the friendly societies, and how the practitioners of the Continent have been anxiously looking towards this country in apprehension lest their own progress may be hampered by the example of Britain. This analysis of the medical opposition to the Insurance Bill as originally framed is in sharp contrast to some of the misleading rubbish which has appeared in other lay columns. It is to be hoped that the lesson it teaches will be pressed home upon the public at large, who cannot then fail to understand the reason for the attitude of the medical profession towards the friendly societies, and the view which the Government has taken of that attitude.

CHRONIC ACETANILIDE POISONING.

THERE are probably few powerful drugs which are consumed more widely and indiscriminately than the coal-tar analgesics, judging from the number of quack remedies which contain one or more members of this group of substances. Moreover, a very large amount is taken in the form of compressed tablets, bought only too easily over the druggist's counter. Considering the well-known toxicity of antipyrin and its congeners, it is a matter for surprise that more has not been written about the poisonous effects of long-continued abuse of these compounds. Dr. Herman C. Gordinier, in recording two cases of chronic acetanilide poisoning in the *Boston Medical and Surgical Journal* of August 10th surmises that part at least of this deficiency is due to errors in diagnosis made possible by deception on the part of the patient. His first patient was a woman of 30, whose flat denial of any drug habit led at first to a mistaken diagnosis, until by careful observation a supply of five-grain tablets of acetanilide was discovered among her belongings. Then it was found that she had for four years been taking a daily dose of 50 to 75 grains. She complained of great weakness, palpitation, faint attacks, and shortness of breath. There was a striking cyanotic tinge of the lips, ears, fingers, and toes. The conjunctivæ were pale and cyanosed, and the skin of the whole body was bluish-black. This colouration varied from time to time, its periods of greatest intensity coinciding with an increase of the subjective symptoms. The heart was dilated, and there was a murmur of mitral incompetence. The spleen was enlarged and tender, the liver less so. An examination of the blood, at the first interview, discovered an erythrocyte count of 9,200,000 per cubic millimetre, with some poikilocytosis, but no other striking change. Several years later, however, the count had fallen to 2,142,610 per cubic millimetre. The colour of the blood was bluish-black. There were several points of superficial ulceration in the skin, one on the front of the left leg, another on the pinna of the ear, and a third in association with the scar of an abdominal operation. A very careful examination of the urine was made. The specific gravity was 1026; the colour, brownish-red when it was passed, changing later to an inky black. It reduced Fehling's solution and yielded dextrosazone crystals with the phenylhydrazine test. The ethereal sulphates were greatly increased. There were no blood pigments, the abnormal colour being due to urobilin. Glycuronates were probably, but not certainly, present. A rapid and continuous improvement began as soon as the tablets were stopped. After a period of excitement and sleeplessness the patient lost her craving for the drug and was apparently cured. The second patient was also a woman, 52 years of age. In her case there was a varying cyanosis, and both liver and spleen were tender and enlarged. The blood and urine displayed much the same changes as in the first case, and there was a similar cardiac enlargement. From his study of these cases and those recorded in medical literature Dr. Gordinier concludes that the continuous ingestion of acetanilide or allied products creates a perfectly definite syndrome of cyanosis, with enlargement of heart, spleen, and liver, a definite blood picture and characteristic urinary findings; and that there is an equally definite acetanilide habit.

THE ACTION OF THE TROPICAL SUN ON MEN AND ANIMALS.

IN the temperate zone a prolonged period of excessive sunshine may have, as we pointed out in these columns on August 19th, some effect upon the mental attitude and physical condition of the inhabitants. Probably the abnormal amount of sunshine which we experienced in the first half of August had some share in bringing to a climax the late remarkable epidemic of strike mania. To work in the blazing sun with the thermometer at 90° F. or more was calculated to produce a state of intense nervous irritability and exasperation of mind, leading to distortion and exaggeration of grievances on one side and impatience at complaints on the other. In the tropics the native worker, if left to follow his own bent undisturbed, seeks the shade and avoids exertion during the heat of the day. Animals also instinctively keep under cover while the sun is shining. Even the monkey, a native of the tropics, making its home in the recesses of the forest into which few of the sun's rays can penetrate, seldom exposes itself to the sunshine for more than a few minutes at a time. Dr. Hans Aron of the Philippines University, Manila, who has lately made an experimental investigation into the action of the tropical sun on men and animals, asserts that the monkey, notwithstanding the fact that it is a native of the tropics, withstands exposure to the sun's rays worse than any other animal with which he is acquainted, not excluding the white man himself. Dr. Aron, in a paper in the *Philippine Journal of Science*, sets out the provision which Nature has made to enable the body to resist the injurious effects of excessive sunshine. The animal body possesses the capability not only of regulating its heat production from the combustion of foodstuffs (chemical heat regulation), but also its loss of heat from convection, radiation, and water evaporation (physical heat regulation). Normally the thermal effects of the surroundings are compensated for, either by a suitable transference of heat to the surroundings or by the conservation or production of heat within the body, so that the body temperature within narrow limits should remain practically the same. There are, however, bounds to this power of regulation. If the body be heated too intensely, or if the loss of heat be inhibited, the latter will accumulate and the body temperature will rise. High air temperatures alone do not change the body temperature so long as the latter can be regulated by the loss of sufficient heat through water evaporation. If the relative humidity of the air be high and therefore the evaporation of water lessened, the loss of heat is inhibited. The radiation from the sun is an important factor. The majority of substances, including the animal body, have a much higher coefficient of absorption of heat than the air has, and therefore they become hotter in the sun than does the surrounding air. A dog placed in the sun soon exhibits symptoms of heat-hyperpnœa; its respiration becomes quicker,

the tongue hangs out, and the saliva increases and drops from the mouth. As dogs have no sweat glands the evaporation of water, which in man is effected by the secretion of sweat, is replaced in these animals by increased evaporation from the surfaces of the lungs, mouth, and especially the tongue. Monkeys, like dogs and rabbits, have no sweat glands, and their physical heat regulation is confined to the reduction effected through water evaporation from the lungs and mouth by increased respiration. Their capacity to evaporate water in this way is limited. Monkeys exposed to sunshine in Manila died within 70 to 80 minutes, but the shade afforded by an open umbrella held over an animal was sufficient to save it from any injurious consequences caused by the sun's rays. Dr. Aron summarises his conclusions as follows. Under climatic conditions, even in the cooler seasons of the year in Manila, animals, such as rabbits and monkeys, which by nature have only a limited power of physical heat regulation, or animals the physical heat regulation of which is artificially inhibited (e.g., by tracheotomy in dogs), die if exposed to the sun, the body temperature rising to febrile heights. If the animals are protected from the rays of the sun, or if the increase of heat due to radiation from the sun is compensated for by an increased loss such as would be brought about by a strong breeze, then the animals experience no ill effects. Insolation of the skull alone is without result if the body temperature is kept within normal limits. The post-mortem appearances in animals which have died as a result of insolation show decided hæmorrhagic lesions of the meninges in the brain, and in monkeys in the heart. In animals without sweat glands the subcutaneous tissues are warmed by the radiated heat from the sun to temperatures above those compatible with life. The human skin if exposed to the sun is warmed to about 3° or 4° C. above the normal skin temperature, an increase to the normal body temperature being, of course, prevented by evaporating sweat. The brown skin of Malays, while theoretically absorbing more heat in the sun, shows a smaller rise in temperature in the tropical sun than the skin of white men in similar circumstances. In explanation of this it is suggested that an earlier and better water evaporation by perspiration takes place in the coloured man, who is said to have larger and better developed sweat glands. A man with a coloured skin is, if this be an anatomical fact, in a better position as regards physical heat regulation than the man whose skin is white.

MEMORIAL MEETINGS FOR DEPARTED MEDICAL MEN.

A BEAUTIFUL custom has been followed for some years past in St. Louis, U.S.A., which cannot fail to elevate the ideals of the medical profession and cement the bonds of professional fellowship, and which might be followed elsewhere with great advantage to the guild of medicine. There are somewhere about 2000 medical men in that city of three-quarters of a million population, and of these more than a third are members of the St. Louis Medical Society. It is the custom of that society to set aside one Sunday afternoon in each year for a mass meeting of the profession in commemoration of those of their number who have died during the preceding year. The proceedings consist of sacred music, a brief address by the President of the Medical Society, and a short appreciation of each of the departed physicians in turn, delivered by someone well acquainted with him in all his relations of life. A few passages from the memorial address by Dr. Robert Schlueter, President of the St. Louis Medical Society, uttered at the last memorial meeting, will serve to illustrate the spirit that animates these pious gatherings. After stating that nine of their number had passed away during the year, Dr. Schlueter said that rarely did it fall to a medical man's lot to have his name and deeds remembered much beyond those who knew him while he was alive. Of those who stood aloof from the common herd, some did so because of superior merit, but many others because of exceptional opportunity or favourable chance, so that the work of men who seemed mediocre should not be under-estimated if it apparently had nothing to give it extraordinary distinction. There were many men whose true worth only became known after the bias of their contemporaries had been removed, while many were of

> "Those who never sing,
> But die with all their music in them."

and very few of these could expect to be rescued from obscurity, as was John Bassett by the searching and keenly observing eye of William Osler. Dr. Schlueter thought that no injustice would be done by regarding his late associates without much discrimination and bestowing upon each of the dead co-workers more or less equal consideration. In this liberal spirit the commemorative addresses were made, and we feel constrained to admit that for simple, direct feeling they are each and all eloquent. It is a remarkable thing that such a spirit of fraternal unity should have come about in a city which, more perhaps than any city in the United States, was a few decades ago notorious for its professional enmities and strife. We repeat, therefore, that the practice is not only a beautiful one, but one which must make for harmony and brotherhood, and we should gladly see it followed in other communities.

THE STERILISATION OF WATER WITH ULTRA-VIOLET RAYS.

THE sterilisation of town water-supplies by means of ultra-violet rays is now becoming more and more popular. The question may fairly be said to have emerged from the experimental stage, at least in France. Along the whole Riviera, from Marseilles to Mentone, general uneasiness is felt in regard to the water-supply. In most places the water is said to be quite good, but it is also very generally acknowledged that it might accidentally be contaminated. If, therefore, some extra precaution could be taken this would be very welcome, and at Nice and Monaco, for instance, the authorities are only waiting for some conclusive verdict or argument that will enable them to decide whether they should sterilise their water-supply with ozone or by the ultra-violet rays. The very popular summer resort, the town of Saint Malo, is not waiting any longer, but has positively decided to adopt the ultra-violet rays for the treatment of its water-supply. At Isle-sur-Sorgues, near Avignon, in the Vaucluse department, waterworks on this principle are nearly finished, while at Maromme, near Rouen, they are completed and in working order. Maromme is the centre of half a dozen small suburban districts or villages close to Rouen, with a total population of 25,000 inhabitants. It has a water-supply derived from the chalk containing only from 6 to 32 bacteria per cubic centimetre. Strict precautions are taken to prevent the contamination of the catchment grounds. But, nevertheless, it only needs an accident or neglect to expose the water intake to serious dangers. Therefore Messrs. Puech and Chabal,[1] who represent the Westinghouse Cooper Hewitt Company of London and Paris, were entrusted with the establishment of quartz mercury lamps for the sterilisation of the Maromme water-supply. An installation has been constructed to treat 25

[1] See THE LANCET, Dec. 17th, 1910, p. 1784.

cubic metres per hour, or 600 cubic metres (132,000 gallons) in the 24 hours. But it is first necessary to filter the water, so as to make sure that it shall be clear enough to permit the easy penetration of the ultra-violet rays. For this purpose a very simple filter suffices, and in this case a filtering surface of 50 metres square is more than enough. This surface is divided into two filters. A layer two feet thick of clean fine sand is placed on a bed of small gravel, and this rests on perforated tiles carefully cemented together. From under the filters the water flows into small tanks or reservoirs that feed the sterilising apparatus. This consists of two distinct parts. There is an automatic valve contrived for the purpose of preventing the passage of the water whenever the electric current ceases. So long as the current keeps the lamp burning the same force closes the valve. But the moment the lamp goes out and the production of ultra-violet rays ceases, then the valve opens. The water thereupon runs through it to waste and does not mix with the purified town supply. When, on the other hand, the electric current is working satisfactorily and this valve is closed, the water passes close to three sides of the lamp and is thus exposed three times to the purifying action of the ultra-violet rays. From calculations made of the expenditure of electric energy necessary and of its cost the impression is gained that the employment of ultra-violet rays is decidedly cheap. As for its efficacy, the bacteriological laboratory of Rouen examined 14 sets of three specimens each taken at different dates between Feb. 13th and March 24th this year. First there was the water fresh from the intake. The number of bacteria per cubic centimetre varied from 6 on March 1st to 86 on March 15th. The colon bacillus was sometimes absent, but generally there were 20 to 30 per 100 cubic centimetres. The second set of samples was taken after the water had passed through the filters, and the number of micro-organisms varied from zero to 14. The colon bacillus had entirely disappeared except from a sample taken on Feb. 25th, when 5 were discovered in 100 cubic centimetres. The third specimen was that of the water after it had been exposed to the action of the ultra-violet rays. In every one of the 14 specimens the water was absolutely sterile; there were no bacteria of any description whatsoever, and certainly no colon bacilli.

HARVEY AND CÆSALPINUS.

THE first volume of a work on physiology by Professor Luciani of Rome has just appeared in an English translation. The contents deal with the circulation and respiration, and incidentally Professor Luciani upholds the claims of Cæsalpinus as against those of Harvey with reference to the discovery of the circulation of the blood. Dr. D. Fraser Harris, in a paper appearing in the August number of the *Edinburgh Medical Journal*, takes up the cudgels briskly on behalf of Harvey. He brings forward nothing new; in all probability there is nothing to bring; but his paper is a useful marshalling of facts. It is but rarely that any scientific discovery can be said to be entirely due to the man who first gives it to the world, but he it is to whom the name discoverer rightly belongs. Thus Adams had calculated the probable position of Neptune before Leverrier, but, owing to the procrastination of the British Astronomer Royal and the want of an acurate star chart, it was Leverrier who obtained the credit, although Adams is now universally allowed to have an equal share in the glory. After the discovery it was found that the planet had been seen before on more than one occasion. Something similar was the case with Harvey; many of his predecessors had noted facts in connexion with the circulation—the Hippocratic writings contain the words *περιόδοι αἱματος*, Galen knew that the arteries contained blood, and Fabricius, Servetus, and Cæsalpinus had all observed phenomena which might have led to the discovery. But Harvey unquestionably was the first to draw the correct deduction from the observations of his predecessors and himself—namely, that the blood does make a complete circuit—and to him therefore rightly belongs the name discoverer.

ACUTE LEUKÆMIA.

THE researches of Ehrlich upon the morphology and staining reactions of the leucocytes of human blood have led to a most accurate examination of the blood in health and disease, with the result that a more or less definite blood picture is now recognised for many infective diseases and for pathological conditions of the blood-forming organs. The original classification of Ehrlich into granular and non-granular leucocytes with their subdivisions—the former into neutrophile, eosinophile, and basophile, and the latter into small lymphocytes, large mononuclear leucocytes, and transitional forms—has been more or less generally adopted, although numerous alternative names have been applied to most of the varieties. The dualistic view of Ehrlich that the granular forms originated in the bone marrow and the non-granular forms for the most part in lymphoid tissues has, however, been much debated, and, although it is now generally accepted, there are a few authorities who believe in the existence of non-differentiated parent cells from which both varieties are derived. Ehrlich's original view has been so far modified as to admit that there is a non-granular stage of the myelocytes or marrow cells, which subsequently develop into the granular forms of the blood. This non-granular form has been called a myeloblast by Nägeli. These cells may appear in the blood under pathological conditions, and since they are difficult to distinguish from the pathological forms of the large lymphocyte, it is obvious that the interpretation of blood films in which they occur may give rise to difficulty. An interesting and critical examination of this question is given in a monograph[1] upon acute leukæmia by Dr. Albert Herz, who has observed eight cases in the wards of Professor Kovacs of Vienna, six of which came to necropsy. He also gives an exhaustive summary of the literature of this interesting and grave condition. He points out that the nature of these cases cannot always be established from the clinical and hæmatological characteristics only, since the blood picture is variable and aleukæmic forms of leukæmia exist. The pathological histology of the blood-forming organs is the most important criterion. Dr. Herz recognises an acute lymphatic and an acute myeloid form of the disease, and believes that the features of this condition rather tend to support the dualistic than the unitarian views as to the origin of the leucocytes. The disease in the majority of cases begins suddenly, usually with fever, associated with great weakness, headache, and pains in the back and limbs. Not infrequently sore-throat or ulceration of the mouth occurs early in the disease, and also marked hæmorrhagic tendencies. Asthenia and cachexia quickly supervene, and are profound. The changes in the mouth comprise, in addition to ulcerations, necrosis and membranous or gangrenous affections. The lymphatic glands and the spleen are enlarged, but much less as a rule than in the chronic forms. Death may occur from hæmorrhage, from secondary septic infections, from exhaustion, or from pulmonary complications. In the acute lymphatic form the lymphocytes are increased, the relative increase being of greater diagnostic importance than the absolute number. They may form 90 or more per cent.

[1] Die Acute Leukämie (Acute Leukæmia). Von Dr. Albert Herz. Leipzig and Vienna: Franz Deuticke. 1911. Pp. 184. Price M.4.50 or Kr.5.40.

of the total. As a rule the pathological large lymphocyte preponderates, though sometimes large and small cells occur in approximately equal numbers, and in rare instances the small lymphocytes preponderate throughout. The pathological large lymphocyte is described by Dr. Herz as a large cell with a large round or oval nucleus and with homogeneous, basophile protoplasm. Sometimes there occur very large forms called giant lymphocytes and others with an indented or lobulated nucleus. Degenerative appearances are not infrequent. All these cells can only be regarded as of lymphoid origin if transitional forms between them and the mature small lymphocyte are present, otherwise the distinction from acute myeloid leukæmia is very difficult. The characters of the blood in this condition are markedly different from the typical blood picture in chronic myeloid leukæmia. In acute myeloid leukæmia the eosinophiles and mast cells may be entirely absent, and there are abundant atypical undifferentiated immature forms of the granular leucocytes: viz., the neutrophile myelocytes and their non-granular early stage—the myeloblasts of Nägeli. In some cases these cells may be the chief ones present. Various small differences in staining reactions are described between the large pathological lymphocyte and the myeloblast, but of these Dr. Herz has only found one at all reliable—viz., that the nuclei of the latter stain very well with the tri-acid stain, whereas the nuclei of the former do not. The pathological histology of the two forms of acute leukæmia is different and approximates in each case to the appearances in the chronic forms. In the acute lymphatic form there is a deposit of lymphocytes in various tissues, whereas in the acute myeloid form there is infiltration of the tissues and organs with cells of myeloid origin, including Nägeli's myeloblasts. The disease has been regarded as a tumour formation, closely related to sarcoma by some authorities, as an infective process by others. Dr. Herz inclines to the latter view, but regards a single or specific cause as improbable, since he believes that various agents have the power to produce changes in the hæmapoietic organs resulting in leukæmia.

NATIONAL INSURANCE IN GERMANY.

IT seems to be the fate of the medical profession that its interests should be persistently ignored by the framers of national schemes of insurance. At the time that our Chancellor of the Exchequer was placing his original measure before the British people the whole of the German laws on the same subject were under discussion in the Reichstag, and great hopes were entertained that some provisions would be included destined to remedy the many defects in the working of the measure as far as the medical practitioner is concerned. One of the principal demands put forward was the inclusion of a definitive and adequate mode of remuneration for medical services in the place of the existing system of bargaining with each sick club. These hopes have been rudely dispelled; in fact, the position has been distinctly rendered worse by increasing the income-limit of the insured from £100 to £125, and medical men throughout the German Empire now recognise that self-help and a strong organisation afford the only means of safeguarding their personal as well as professional interests. It has been decided to form an organisation of medical practitioners with the object of obtaining full recognition of the demands hitherto ignored. A central board, we are informed by a German correspondent, has been formed to which the task of enforcing these demands will be entrusted, and the following line of action has been decided upon. In the first place, all contracts between medical practitioners and sick clubs must be submitted for approval to the central board. To further the free choice of doctors commissions and arbitration boards are to be formed, and steps taken to prevent the treatment of sick-club patients by unqualified persons. Of particular interest is the decision to enforce the usual fees in the case of sick-club patients with an income between £100 and £125. This is due to the fact that the extension of the income-limit will include within the scope of compulsory insurance a large number of persons which hitherto formed a not inconsiderable portion of the medical practitioner's private practice, and their loss will necessarily entail serious financial results. It was also decided to consider the establishment of a uniform standard of fees for professional services, applicable throughout the German Empire, rendered to members of sick clubs.

THE REVISION OF THE PHARMACOPŒIA.

A FURTHER report has been issued by the Committee of Reference in Pharmacy to the Pharmacopœia Committee of the General Medical Council. It includes the results of work accomplished by the committee from January, 1910, to May, 1911, and with it has been published a supplementary report dealing with work which has been done subsequently. It may be assumed that these two reports are the last of the series to be issued by the committee, and the Pharmacopœia Committee now has at its disposal a mass of valuable material which will form the skeleton of the monographs in the next edition of the Pharmacopœia. The newly issued reports deal chiefly with the monographs from Jalapa to Zinci Valerianas, and also include an appendix giving the processes for (1) the determination of the acid value of fixed oils, fats, waxes, and resins; (2) determination of the saponification value of fixed oils, fats, waxes, and resins; (3) determination of the iodine value; (4) determination of the unsaponifiable matter; (5) saponification process for volatile oils; and (6) acetylation process for volatile oils. In many of the monographs important alterations are suggested.

ON SOME EFFECTS OF SALICYLATES AND ASPIRIN.

THE unpleasant effects of salicylates in overdoses or in hypersusceptible persons are well known, and the fact that aceto-salicylic acid, or aspirin as it is more generally named, sometimes causes gastric pain and other evidence of digestive derangement, especially if given with alkalies, is also a matter of common knowledge. We publish in this week's issue of THE LANCET two papers referring to certain aspects of the action of these drugs which are worthy of note. The first of these is by Mr. H. Ewan Waller, who gives notes of three cases, which he suggests indicate that the salicylates, including aspirin, have a powerful influence against the activity of the thyroid gland. He first discusses the theory that the ordinary symptoms of fever are due, at any rate in part, to increased activity of the thyroid gland brought about by poisons or by toxic agencies of various kinds. This theory, as he points out, was expounded in an interesting article published in THE LANCET of Nov. 9th, 1907, by Dr. Arnold Lorand, who reviewed the evidence, partly experimental and partly clinical, upon which it was based. Mr. Waller then discusses his own cases, the first of which was a patient with acute tonsillitis and febrile manifestations. After considerable doses of sodium salicylate and of compound tincture of cinchona, a subnormal temperature, a low pulse rate, and obstinate constipation supervened—symptoms which, together with a low blood pressure, Mr. Waller attributes to depression of thyroid activity. His second case was a woman with "minor

thyroid inadequacy" and chronic constipation. The last-named symptom was found to be increased by aceto-salicylic acid, administered for lumbago. The increased constipation is interpreted as due to exaggeration of the thyroid depression brought about by the drug. The third case was one of Graves's disease, in which considerable improvement occurred after treatment by aspirin. Mr. Waller's suggestions can at most be regarded as tentative, even though the thyroid theory of the nature of fever be, as he states, a tempting one. The complex chemical interrelations of the various organs of the body through the agencies of hormones and internal secretions constitute some of the most striking results revealed by modern experimental research, and have opened up a fruitful field of therapeutic possibilities. Numerous ingenious speculations as to these functions have been propounded, among them the thyroid theory of fever, but it is important to bear in mind, as Mr. Waller obviously does, that they are theories. His conclusion that aspirin may possibly be useful in the treatment of Graves's disease is worthy of trial, but its success would by no means establish the accuracy of his explanation. In this connexion it is interesting to note that salicylates in large doses have been recommended in the treatment of thyroiditis. The other note to which we refer is a brief account of two cases showing swelling of the face and urticarial wheals after taking aspirin in moderate doses. The swelling of the face in both instances appears to have been considerable, so as to make the patients almost unrecognisable, and in both the tongue became enlarged. The condition appears to have been of very short duration. In view of the alarm to which such a condition must give rise, it is important to bear in mind the possibility of its being due to aspirin, and Dr. Alexander Brown's note should be useful in calling attention to the matter.

JOHN LEYDEN'S CENTENARY: CIVIL SERVANT AND PHILOLOGIST.

THE British Empire, in its colonial expansion particularly, owes much to its medical men, not only in the strictly professional sphere, but in others more or less open to cultured intelligence when thrown into situations appealing to its exercise. The court physician at oriental seats of government, the medical missionary in semi-civilised or partially explored countries, the practitioner attached to outlying posts in colonies or dependencies, the surgeon serving in the army, navy, or mercantile marine—to each and all of these the British name or prestige is signally indebted for initiative or achievement redounding to its interests, immediate and permanent. Sir John Macneill as body-physician to the Shah of Persia, Dr. Livingstone at missionary stations in Central Africa, Sir Joseph Fayrer or Sir Harry Ker-Innes at their respective posts in Hindustan, a Huxley or a Spencer-Wells serving at a naval command in tropical or sub-tropical waters, are but a few out of many conspicuous examples of the medically qualified professional man utilising his opportunities or employing his leisure for the advancement of his country's interests in the positions or the circumstances in which his lot happened to place him. A book, indeed, fascinating, even romantic in its tenor, might be written on what Lord Morley calls the "flexibility of adaptation" displayed by the British medical man in situations or crises evoking his intervention, proving, *inter alia*, that the mind scientifically trained, and quickened by contact with nature in its many phases, animate or inanimate, individual or social, can "take occasion by the hand" and utilise its energies to the benefit of humanity in ways as profitable as they are unexpected. The recent celebration of the centenary of John Leyden's death did not fail to remind his compatriots of the "flexibility of adaptation" in question, conspicuous as, in his short-lived career, he became, not only for medical work in the Madras Presidency, but also for biological, ethnographical, and philological study among the races of the Far East, which made him in those subjects an authority of world-wide recognition and acceptance. A Borderer contemporary with Sir Walter Scott, who has portrayed his strongly marked and complex personality in vivid colours, he so utilised his opportunities as to become the most brilliant oriental scholar of his time, giving an impetus to ethnological and linguistic research which had its effective continuation in the work of another and a kindred spirit, also of medical training and experience, Dr. James Cowles Prichard, whose monograph on the Celtic races long held the field as the most learned contribution to a supremely difficult subject. Sir George Douglas, who, as a cultured and sympathetic Borderer, presided at the Leyden commemoration, in the course of his speech referred to other fields in which the hero of the day excelled, conspicuous among these being that of legendary poetry, in which Leyden was not only a collector and commentator, but no mean performer himself, as Scott and Campbell, his contemporaries, have testified. So true it is that the plastic and multiform mind loses nothing by its early concentration on science, particularly when the science in question is that devoted to the study of mankind in its numberless phases, whether of health or disease.

THE AMERICAN PROCTOLOGICAL SOCIETY.

THE Thirteenth Annual Meeting of the American Proctological Society was this year held at Los Angeles, California. Dr. George J. Cook, of Indianapolis, the President, was in the chair. Among papers of importance one was read by Dr. Granville S. Hanes of Louisville, Kentucky, on the Surgical Anatomy of the Colon. He pointed out that *in situ* the large intestine was shorter than after dissection, and that a 30-inch colon tube was long enough to extend from the anus to the cæcum; however, he claimed that it is not possible to pass a rectal tube beyond the middle of the sigmoid, and beyond this the splenic and hepatic flexures form insurmountable obstacles to the passage of a tube. He had been able to show that a bland liquid introduced by means of a funnel and tube into the rectum would flow out of an old appendicotomy opening after a few minutes. He insisted that the "inverted" position of Hanes was to be preferred both by the operator and the patient when any kind of illuminating instrument is to be employed in the rectum or sigmoid. A "symposium" on Constipation, embracing seven different parts of the subject, was presented: Dr. Horace Heath of Denver spoke on the Etiology of Constipation; Dr. Samuel T. Earle of Baltimore on its Physiology; Dr. John L. Jelks of Memphis on the Bacteriology of, and the Urinary Findings in, cases of Constipation; Dr. W. M. Beach on the Pathology and Diagnosis; Dr. Alfred J. Zobel of San Francisco on the Sequelæ of Constipation, including Auto-intoxication; Dr. Dwight H. Murray of Syracuse, N.Y., on the Non-surgical Treatment; and Dr. Louis B. Hirschman of Detroit on the Surgical Treatment of Constipation. Dr. Donly C. Hawley of Burlington, Vermont, described two cases of pruritus ani which he had treated successfully by dilatation of the anal canal, scraping all ulcerated patches, and cauterisation of the entire area of inflamed skin by means of a Paquelin cautery. Dr. T. L. Hazzard of Pittsburg described four recent cases of foreign bodies in the rectum. In two of these cases in children the foreign body was a match which had been swallowed, in another case a 3-oz. oval medicine bottle had been introduced by the patient; and in the fourth case the foreign body was a beer-glass 2 inches wide and 3½ inches tall; this also had been put in by the patient. In all the cases the foreign body was removed, but the beer-glass broke while being withdrawn. We make no

attempt to refer to every paper read at the meeting, but the interesting and important character of some of the observations justify what would otherwise seem an unduly specialistic undertaking.

ENGLISH CENSUS, 1911: PRELIMINARY REPORT.[1]

WE received recently a copy of the Registrar-General's introductory report on the twelfth Census of the population of England and Wales, which was taken on April 3rd, 1911. This volume furnishes the means of measuring the growth of the population during the several intercensal periods since 1801, the year of the first English Census. The report is based, not on a tabulation of the "household schedules" at the Central Office, but on the summaries of population returned by the local registrars, who are responsible for the enumeration of the inhabitants in their respective areas. It gives simply the numbers and sexes of the people in the counties, and in the urban, rural, and other districts of England and Wales. In preparing the subsequent reports the contents of the schedules themselves will be scrutinised at Somerset House, and amended population statistics will be set forth in greater detail than in the present report, which is avowedly a preliminary one merely.

In accordance with precedent, the enumeration of the people has been carried out by means of household schedules, the enumerators working under the direction of the district registrars. There are in this country 2009 registration sub-districts, which for Census purposes were subdivided into 35,000 enumeration districts, for each of which an enumerator was appointed. Considerable changes have been made in the enumeration arrangements—the most important of which consists in the discontinuance of the use of enumeration books. At previous Censuses the contents of the schedules were copied by the enumerators into books, from which the results of the Census were tabulated—a laborious task of which general complaint was made. With the object, *inter alia*, of avoiding risk of error in the process of transcription, the present Census Commissioners decided to relieve the enumerators of this complicated and monotonous work.

The present volume is merely introductory to the revised official returns of the recent Census. We learn that the first of the subsequent volumes will consist of information relating to the whole country, but dealing with particular subjects only. At a later date volumes will be issued relating to separate counties or groups of counties. Finally, a report will be presented on the "Census of the British Empire," somewhat on the lines of the Census Report of 1901, which for the first time afforded authoritative statistics for the Empire as a whole.

Census Results.

The returns show that at midnight on Sunday, April 2nd, 1911, there were living in England and Wales 36,075 269 persons at all ages and of both sexes, or an increase of 10·9 per cent. on the numbers enumerated in April, 1901. In proportion to population, the percentage increase was smaller, although the actual increase of population since last Census was numerically greater than in any previous decennium. The net gain of population, by excess of births over deaths, which had been 12·39 per cent. in the intercensal period immediately preceding, rose in the period 1901–1911 to 12·44 per cent., this result being due to the counterbalancing of the great reduction of the birth-rate by a still greater reduction of the death-rate.

Sex Proportions

Of the 36,075 269 persons enumerated at the last Census, 17 448,476 were males and 18,626,793 were females. This gives an excess of 1,178,317 females over males. The proportion of females to males was the same at the two last Censuses—viz., 1068 to 1000—but when allowance is made for the number of men absent on service in South Africa in 1901 there is no doubt that the true proportion of females to males was somewhat lower in 1901 than in 1911. The sex distribution of the population varies considerably in different parts of the country; for whilst the proportion of females to 1000 males did not exceed 912 in the county of Monmouth it was equal to 1218 in Sussex.

Population Estimates.

The provisional estimate of the English population in 1911, based on the assumption of an annual rate of increase equal to the mean rate in the previous intercensal period, was in excess of the enumerated Census population by 1·13 per cent. In 1901 the estimated was less than the enumerated population by 0·44 per cent. Rates of mortality and other expressions showing proportions to the estimated population are necessarily affected to a corresponding extent, but, of course, in the opposite direction. Thus the birth-rate and death-rate for the year 1910, provisionally given in the Annual Summary as 24·8 and 13·4 per 1000, are found, on revision, to be 25·1 and 13·5 respectively. Taking England and Wales as a whole, the errors arising from the traditional method of estimating populations will be seen by the above figures to be comparatively trivial, but in calculating the mortality-rates for certain local areas where the differences between estimated and Census results are far greater, the defect of any method based on a general assumption is very serious. Moreover, it is in these very cases that the difficulty of devising a remedy is greatest. The natural increase of the population by excess of births over deaths is known; but the balance of inward and outward passenger movement (the balance of migration) is not known. If only trustworthy statistics of passenger movement classified according to place of residence of the passengers were available, it would become possible to frame current estimates of the English population which would be approximately accurate from year to year. It is earnestly to be hoped that in the near future this necessary information may be forthcoming. But the method of estimating population by births, deaths, and migration is now only practicable in the case of England and Wales as a whole; it is not possible in the case of portions of the country, since no records of internal migration exist. Perhaps the most promising of the many methods hitherto suggested for overcoming this difficulty is that which has been adopted in the case of the metropolitan boroughs, where estimates based on the rate-book records have been made for several years past under the Equalisation of Rates Act. There is reason to believe that in the course of those years the accuracy of the estimates has been generally increased. In a few instances, however, notably those of Wandsworth, Westminster, Finsbury, Lewisham, Woolwich, and Greenwich, the method has hitherto failed. These instances serve to show that, in the words of the report, "even the best methods hitherto devised for estimating populations of local areas cannot be trusted in the later years of a decennium. They therefore emphasise the importance of more frequent Census enumerations, not only in the interest of vital statistics and sanitary progress, but also for the purpose of ensuring the proper distribution of public funds when this is to be determined by the number of the population."

Administrative County of London—Greater London.

In the 100 years 1801–1901 the population of the area now covered by the Administrative County of London increased from 959,310 to 4,536,267. At the Census of 1911 the population was found to number only 4,522,961, showing for the first time an actual decrease of 0·3 per cent. In recent previous decennia the increase has varied from 7·3 to as much as 17·4 per cent. The metropolis furnishes the most remarkable instance of decline of population in the central portion of a large city. In the centre of London the population has for many years been decreasing owing to the substitution of business premises for dwelling houses. But around this central area there is a circle of districts the population of which is gradually increasing; whilst outside these again there is a zone of suburban districts in which the population is increasing with extraordinary rapidity. Outside the Administrative County is a wide belt of suburban towns and districts designated the "Outer Ring," which, together with the County of London, constitutes "Greater London." The population of this area now exceeds seven and a quarter millions; and although its growth in the recent decennium has been less than in previous decennia, it amounted to more

[1] Census, 1911: Preliminary Report. [Cd 5705.] London: Wymans, Limited. Pp. 142. Price 1s. 4d.

than 670,000 persons, or 10·2 per cent. In the "Outer Ring" the increase was equal to 33 per cent.

United Kingdom.

The total number of persons returned as living in the United Kingdom on April 3rd last was 45,216,665, an increase of 9·1 per cent. on the number enumerated ten years previously. The population of England is returned as 34,043,076, that of Wales 2,032,193, that of Scotland 4,759,445, and that of Ireland 4,381,951. While the populations of England, Wales, and Scotland have shown continuous increases during the last 90 years, the population of Ireland, which in 1841 had risen to over 8,000,000, has shown a continuous decrease ever since that date. England now contains 75 per cent. of the population of the United Kingdom, Scotland rather more and Ireland rather less than 10 per cent., whilst Wales contains the remaining 4½ per cent. In the early part of last century Ireland contained nearly one-third of the population of the United Kingdom, but at the recent Census it was only 9·7 per cent.

THE SIXTY-FIFTH REPORT OF THE COMMISSIONERS IN LUNACY.

Numbers of Insane in England and Wales.

ON Jan. 1st, 1911, the number of certified insane persons in England and Wales was 133,157, exceeding the number recorded on Jan. 1st, 1910, by 2604. The average annual increase for the ten years ending Dec. 31st, 1910, was 2521, and that for the five years ending on the same date 2236. The increase for the year 1910 was therefore 83 above that of the annual average of the decennium and 368 above that for the quinquennial period. The increase in the population of the county and borough asylums for the year 1910 amounted to 2·2 per cent. The number of patients in registered hospitals increased by 3·3 per cent., in the criminal asylums by 4·3 per cent., in ordinary workhouses by 2·3 per cent., and in the metropolitan district asylums by 2·9 per cent. The private single patients have increased by 3 per cent., whilst the decrease in the number of insane outdoor paupers amounted to 3·2 per cent., and of patients in licensed houses to 1·6 per cent. in the metropolitan and 1·1 per cent. in the provincial houses. Private patients under care on Jan. 1st, 1911, numbered 10,890 (males 4709, females 6181), an increase on the figures of the preceding year of 274, or 2·5 per cent. A fact of some interest has been the change that has taken place in the relative distribution of the sexes since reliable statistics were established. Thus in 1859 the class of private patients comprised 2456 males and 2223 females, or a percentage distribution of males of 52·5, females 47·5; whereas in 1911 the proportions are reversed, being males 43·2 and females 56·8.

The pauper patients under care on Jan. 1st, 1911, were 121,172 (males 56,142, females 65,030), amounting to 91 per cent. of all the notified insane. The numbers show an increase of 2271 over last year, a figure which is 24 below the mean annual increase of the past ten years, but as many as 747 above that of 1909. The rate of increase of last year's numbers was 1·9 per cent., or 0·6 below that of the private patients. The males increased by 1·8 per cent. and the females by 1·9. In this class the female sex has always markedly predominated as evidenced by the percentage proportions. The criminal insane (males 832, females 263) show a net increase of 59, of which 22 appertain to the county and borough asylums.

Ratios of Insane to Population.

On Jan. 1st, 1859, there were known to be under care 36,762 persons certified as insane, and on Jan. 1st, 1911, the number so notified amounted to 133,157, an increase on the numbers of 1859 of 262·2 per cent. During the same period the estimated population of England and Wales has increased by 85·8 per cent. A clearer estimate of the apparent disproportionate growth of the numbers of the insane is to be found by contrasting at different periods the ratio which the latter bear to the general population. On Jan. 1st, 1911, the total number of notified insane persons stood to the estimated population in the proportion of 1 to 275, or 36·4 per 10,000. This gives an increase on the ratio of the preceding year of 0·83 per cent. On Jan. 1st, 1901, this ratio was 33 09, so that in the ten years it has increased by 10 per cent., the proportion of insane to the population rising from 1 to 302 to 1 to 275. The ratio of insane to population, which on Jan. 1st, 1869, was 23·93 per 10,000, had risen to 36 40 on Jan. 1st, 1911, an increase of 52 1 per cent. The ratio of admissions to population, which in 1869 was 4·71, was 6 04 in 1910, an increase of 28·2 per cent., or 1·1 less than in 1909.

Is "Occurring" Insanity Increasing?

The Commissioners point out that the increase in the number of the insane recorded year by year is no proof of the growth of insanity in the community, although it is often assumed to be such. There are, in point of fact, no sufficient data for a correct judgment on the latter head, and such evidence as there is tends to the conclusion that if insanity is increasing at all it is doing so very slowly and not proportionately to the increasing numbers of insane persons under care. For instance, some indication, it might be thought, would be given by the numbers who are admitted to care for the first time. Statistical information as to these first admissions is only available from 1898 onwards, and the ratio which their numbers bear to the population has been almost constant, that of 1910, however, being lower than in any other of the 13 years. Of some significance is the slight but obvious increase in the number of cases which are admitted for their first attack of insanity, but even here the relative increase of such cases does not necessarily imply an actual increase of insanity, for there are factors to be considered which render it impossible to determine whether the actual proportion of "occurring" insanity is really increasing in the community. It is probable that far more care is taken to segregate persons suffering from the minor forms of insanity than used to be the case, and it is certain that in the case of the aged numbers now go to swell the list of first attacks which formerly were not removed to asylums. But whether insanity be increasing or not, there is no question that the increasing numbers of those who have to be cared for are due to accumulation—that is, to the increase in chronic and irremediable insanity due to survival.

Recovery-rates and Death-rates.

The daily average number of certified patients was last year 105,580, the proportion in county and borough asylums being 93·3 per cent. The admissions numbered 21,861, or 97 above the number in 1909; and of the total admitted 17,961, or 82·1 per cent., were first admissions, being 0·3 below the decennial mean. There were discharged 9824 patients, of whom 7501 were stated to have recovered. The recovery rate, reckoned upon the total admissions, was 34·31 per cent., being 1·67 below the rate for 1909, and 2·18 below the average for the ten years 1901–10 inclusive. The rate for females, 37 41, was higher than that for males, 30·84. The rate in the asylums was 34 per cent.; amongst private single patients 58 per cent. The deaths numbered 9777 and were fewer by 361 than in 1909. The death-rate reckoned on the daily average number resident was 9 26 per cent., being the lowest yet recorded in any year and 0·61 below the average for the ten years.

Factors in the Causation of Insanity.

The statistics before the Commissioners have, since their introduction upwards of 30 years ago, appeared to show that there is a family history of insanity in persons admitted to asylum care amounting on an average in the case of males to 19 per cent. and of females to 23 per cent. of the total yearly admissions. This is probably an under-estimate, as there is always a considerable number of patients concerning whom it is impossible to obtain positive information on the point. The Commissioners point out that the question is not simply one of an *insane* heritage, but rather of a transmission of an instability of the nervous system which may manifest itself in many directions apart from actual insanity. Besides insane heredity two other factors stand out prominently in the history of insane persons. These are the toxic agent alcohol and the factor of mental stress. As regards alcohol, it was returned apart from any correlated factor in 7·3 per cent. cases. Of the two main forms of mental distress, that which is prolonged is far more commonly associated with the development of insanity than are sudden emotions and shocks. It appears from the returns to have been the only assignable cause in 9·6 per cent. cases, while sudden stress was thus

accepted in 2·2 per cent., each form being rather more frequently thus observed in females than in males.

With regard to the Asylum Officers' Superannuation Act, 1909, the Commissioners regard it as too early to speak with confidence as to how the Act is working generally, while it will take some time before all the points of difficulty that may arise will be satisfactorily cleared up. They welcome the Act as a move in the right direction, and hope that if some of its provisions turn out to be so restrictive as to be unworkable steps will be taken to get them amended.

REPORT OF THE MASSACHUSETTS STATE BOARD OF HEALTH FOR 1909.

THERE is little need at the present time to emphasise the necessity for a pure water-supply in order to maintain a high standard of public health; and, as a matter of fact, in the last report of the medical officer to the Local Government Board not a single epidemic due to water-borne disease is related to have occurred, so satisfactory is the condition of things in this country in this respect; nor was any inquiry deemed necessary in regard to any town of importance as to the sufficiency or purity of its sources of drinking water-supply. A similar satisfactory state of things obtains in Massachusetts, where it is many years since any serious epidemic traceable to a public water-supply has been recorded, a result doubtless due, in a very considerable degree, to enforcement of legislation for the protection of such supplies. Moreover, the improvement in health of the population has been far more marked than can be directly attributable to diminution in water-borne disease. Statistics of sickness are not available, but the reduction in the general death-rate has been greatly in excess of that due to enteric fever or other diseases known to be spread by means of drinking water. This improvement in the public health has given to that State "a reputation for the protection of the public interests in this regard that has doubtless been of material advantage to it in other ways." We quote from the forty-first report of the State Board of Health,[1] and are glad to feel assured that the same might be said of the great majority of public authorities in our own country. As population increases danger may arise from tracts of land that are within the gathering ground of a public water-supply becoming inhabited; this has actually occurred in Massachusetts, and its possibility cannot be disregarded anywhere. No doubt an ample reservation has been secured around the artificial lakes that have within recent years been connected with Liverpool, Manchester, and Birmingham as water-supplies; and Loch Katrine, that supplies Glasgow, has so large a cubic content as to be practically safe if ordinary care be taken. The pollution of rivers in Massachusetts is a standing menace to public health, and in a much greater degree than with ourselves; contamination by sewage and foul drainage from manufacturing establishments has increased greatly during the past few years, and numerous complaints of nuisances have been made. All plans of proposed schemes of drainage are submitted to the Board of Health before being carried out; but it has no power to prevent or limit pollution of rivers by those places which had sewerage systems in existence before the laws requiring the approval of the Board were enacted; the Board has no power of action in such cases of continued pollution except to report to the legislature.

The working of the Lawrence Experimental Station has been continued with results of ever-increasing value. The sand filters, to which sewage has been applied for a period of nearly 22 years, continue to produce effluents purified as well as, or better than, ever; contact filters which have been used for eight years, and sprinkling filters in use for ten years, are still in operation; the purification of manufacturing wastes has been studied, and the disposal of sewage sludge by destructive distillation has been specially investigated. Some of the chief results of these researches will now be summarised.

Water Supplies.

The consideration of the quality of water-supplies, as determined by chemical examination, is divided into that of the surface waters and that of the ground waters, since these present essential differences in character. Averages of all the analyses made during the last five years have been calculated and the considerable body of information so obtained is presented in the form of tables.

Surface water-supplies.—The Massachusetts observers consider that the quantity of organic matter present in surface water is best indicated by the determination of the ammonia present, especially the albuminoid ammonia. They do not lay down any limit or standard, but present a large body of actual observations, carried out during five years on 146 different supplies. Taking 0·01 per 100,000 as a provisional standard (although this is not definitely recommended), we find that 21 out of 28 streams do not exceed this limit; but only 3 out of 48 lakes, and 10 out of 70 artificial storage reservoirs, are equally pure in regard to this index of organic matter. Of the streams, one only contained more than 0·02, while 5 of the lakes and 29 of the storage reservoirs exceeded this quantity. The running streams were, therefore, purer in regard to their organic matter than either lakes or reservoirs. It is stated that nearly all of these last were formed by the flooding of areas from which the soil and organic matters had not been removed. As to free ammonia, all of the streams except 1, all of the lakes but 5, and 50 out of the 70 storage reservoirs, contained not more than 0·005 per 100,000.

Ground waters.—There are fewer ground-water supplies; most of the older waterworks are supplied from surface sources, the new supplies are generally obtained from underground. The usual method of obtaining "ground water" is by tubular wells, sunk from 25 to 50 feet deep; next in frequency come large circular wells, 20 to 40 feet deep; then the so-called filter galleries, which are "elongated wells," 10 to 20 feet deep, located along the shore of a pond or near a stream. These galleries are usually rectangular in section and often several hundred feet long. Both the shallow circular wells and the filter galleries are often supplemented by tubular wells sunk in their bottoms or near by. The most important consideration in comparing the qualities of ground waters is their relative freedom from sewage pollution; this is ascertained by determining the normal quantity of chlorine present, then by examination finding the total quantity in the sample; the excess is presumably due to sewage impurity. The waters are divided into three groups: those in which the excess of chlorine is *nil*, or not more than 0·1 per 100,000; those in which it is between 0·1 and 0·3; and those in which it is more than 0·3. Of a total number of 88 ground-water sources, 40 came under the first head, 20 under the second, and 28 under the third. The amount of nitrate present is also regarded as an index of exposure to pollution in a ground water. When this is derived from uninhabited ground the nitrates are either absent or very scanty; they are present slightly in waters derived from pasture lands, in noticeably larger quantity in waters derived from cultivated lands, and are very high in those from thickly settled regions, being formed from the ammonia of house drainage and other animal matter. Their determination therefore is of value, especially in connexion with the chlorine analysis. In 30 cases the nitrates were less than 0 01 per 100,000; in 45 between 0·01 and 0·1; and in 15 they exceeded 0·1. Of the 30 waters that were pure as regards nitrates, 24 also contained only 0·1 or less of excess chlorine; of the 15 waters containing more than 0 1 nitrates, 14 also contained more than 0·3 excess of chlorine. The determinations of the free and albuminoid ammonias in ground waters are "indices of the extent to which a polluted water has been purified and freed from organic matter in its passage through the ground." In only four of the 90 samples was more than 0·01 per 100,000 detected of albuminoid ammonia; three out of these four were in the first class as regards freedom from chlorine, and the same three contained less than 0·02 nitrates. In only five out of the 90 was more than 0·01 free ammonia found; three of these also contained more than 0·01 albuminoid ammonia, two of which were in the first class as regards chlorine. Purity, reckoned from minimal chlorine content, may therefore coexist with relatively high ammonia content, both free and albuminoid. No allusion is made to the bacterial content of these waters. It does not appear that the chemical constitution, however carefully determined, can afford any indication of the safety or otherwise of a drinking water comparable in value with that to be obtained from bacteriological

[1] Forty-first Annual Report of the State Board of Health of Massachusetts. Boston, 1910.

examination, though the one form of examination may usefully check the other.

Consumption of water.—In the metropolitan water district, comprising Boston and its neighbouring towns, with a population of just over a million, the consumption is 121 gallons (U.S.) daily per head (= 101 imperial gallons); a few towns have an even larger supply. Boston itself has 119 imperial gallons per head; in nine only is it less than 25 imperial gallons per head per day.

Purification of Sewage.

The world-renowned experiments at the Lawrence Station are still being carried on; the sand-filters have now been in operation for 22 years, and trickling filters and contact beds for ten and eight years respectively. Mr. H. W. Clark and Mr. S. Gage, who contribute this report, state that "sludge disposal is at present the most serious problem in the disposal of sewage on a large scale, and, as in past years, methods of disposing of sludge, and also the sediment present in the effluents of contact and trickling filters, have received attention."

Preliminary treatment for clarification.—Experiments have been continued on the action of the settling tank at Lawrence. This is a cylindrical tank with a sloping bottom; the sewage enters near the bottom and rises slowly to an outlet near the top, the period of sedimentation being about two hours; the sludge is removed each week.

Parts per 100,000.	Albuminoid ammonia.		Kjeldahl nitrogen.		Oxygen consumed.	Bacteria per c.c.
	Total.	In solution.	Total.	In solution.		
Lawrence sewage	0·91	0·52	2·75	1·83	9·52	1,136,400
Settled sewage ...	0·48	0·28	0·88	0·50	3·85	977,800

The average removal of suspended matter from the sewage during the year has been about 41 per cent., as shown by the albuminoid ammonia results; the total removal of organic matter has been 29 per cent. and 32 per cent., as shown by the total albuminoid ammonia and oxygen consumed respectively. A similar settling tank at Andover has furnished similar results. A third tank has been installed on the Imhoff, or Emscher, principle. This is of cylindrical form with conical bottom, inside which is a smaller cylinder of similar shape, containing a baffle plate, and provided with a trapped outlet connecting it with the large tank in which it is suspended. The sewage enters at one side of the inner tank, flows under the baffle plate, then rises and overflows through an outlet on the other side. The solids deposited in the inner tank pass downward through the trapped outlet into the large tank, where they accumulate and become decomposed by bacterial action. Owing to the trap in the outlet of the inner tank, the gases and other products of sludge decomposition do not mingle with the sewage during its passage through the tank. The capacity of the outer tank is equal to about 24 hours flow, and that of the inner tank to about five hours flow. During five months' working 86 per cent. of suspended matters was removed, as shown by albuminoid ammonia; and 71 per cent. of total organic matter, as shown by both albuminoid ammonia and oxygen consumed. The sludge accumulated in the five months amounted to about 25 cubic feet per million gallons of sewage. The efficient removal of suspended matter is said to be largely due to the fresh character of the sewage.

Parts per 100,000.	Albuminoid ammonia.		Kjeldahl nitrogen.		Oxygen consumed.	Bacteria per c.c.
	Total.	In solution.	Total.	In solution.		
Fresh sewage ...	1·89	0·72	5·63	3·04	10 00	2,849,300
Imhoff tank effluent	0·55	0·38	1 38	0·99	2·87	2,704,100

Filtration.—The working of the historic sand filters at Lawrence has been continued, four filters having now been in operation for nearly 22 years. For 16 years (since 1893) these filters have been operated without removal of the sand, the surface being merely dug over four times a year. In winter the trenches are covered with boards, which, together with the snow that accumulates on them, protect the filters from cold. Filter No. 1 may be taken as an example; it is 60 inches in depth and has had sewage applied at the rate of 50,000 gallons per acre; the size of the sand particles is 0·48 millimetre.

Parts per 100,000.	Free ammonia.	Albuminoid ammonia.	Oxygen consumed.	Bacteria per c.c.
Sewage...	4·06	0·67	5·43	—
Filter effluent ...	0·7688	0·0626	0·72	7600

Four "contact filters" are described; two of these, 5 feet in depth and composed of coke fragments, ¼ to 1 inch in size, have been in use since 1901; they are each filled once daily, and allowed to stand full for two hours. No. 175 was operated at an average rate of 415,500 gallons, and No. 176 at 270,000 gallons per acre daily, the former receiving sewage that had passed through a coke or coal strainer, the latter settled sewage. The former worked well, yielding an effluent containing 0·8698 free ammonia and 0·2670 total albuminoid ammonia, and 2·07 oxygen consumed; the latter lost about 11 per cent. of its open space during the year, and became badly clogged with organic matter. The effluent averaged 1·1545 free ammonia, 0·1644 total albuminoid ammonia, and 1·64 oxygen consumed. Two "slate filters" have been under observation; it is stated that filters constructed of horizontal layers of slate "were first tried at this station in 1901, and they have been much exploited in England during the last few years." The two at Lawrence are constructed of layers of roofing slate placed horizontally, the layers of slate being separated from one another by small concrete blocks ¾ in. thick. One (No. 376) contains 27 layers of slate, the exposed surface available for sludge deposition being about 314 square inches per gallon of sewage when full; the other (No. 377) has eight layers, and about 187 square inches of surface per gallon of sewage. Both are operated as "contact filters," being filled in one dose daily, and drained slowly after a two hours contact; they have been operated six days a week for five months without any sludge removal. No. 376 has received ordinary sewage, and No. 377 fresh supernatant sewage from the Imhoff tank. The purification has been as follows:—

Parts per 100,000.	Free ammonia.	Total albuminoid ammonia.	Oxygen consumed.	Bacteria per c.c.
No. 376, Sewage	2·63	0 420	3·25	—
Filter effluent ...	2·36	0·314	2·25	516,300
No. 377, Sewage	6·25	0·69	4·46	—
Filter effluent ...	6·34	0·67	4·05	1,793,800

The nitrates in No. 376 effluent were 0·05 and in No. 377 were 0·13 per 100,000. There was practically no nitrification; "these so-called filters are simply contrivances to remove and, if possible, destroy sludge by biological action." This is the view generally held in this country, where they have been found to be effective and economical in dealing with the solid matters, but are not looked on as "filters," or as effective for complete purification of sewage.

Seven "trickling filters" have been in operation. The difficult question of effective distribution has been studied by a comparison between an automatic flush tank and dash-plates and a travelling distributer of the Fiddian type. The sewage flows into a hopper carried upon the central pivot, and thence through a central trough which travels with the distributer, and empties through a number of openings into the buckets upon the periphery of the cylinder; from these it is discharged upon the surface of the filter as the cylinder turns. Perfectly even distribution should, theoretically, result; in practice, small irregularities in the metal work of the apparatus, and slight unevenness in the track, the elimination of which would make the construction of the apparatus too expensive, have prevented

absolute uniformity of distribution. This, however, has been "much more uniform than with any of the devices previously tried." With the dash-plate method formerly in use only about 17 per cent. of the filter surface received the sewage at the intended rate—viz., from 1,000,000 to 2,000,000 gallons per acre daily; about 24 per cent. received none; about 23 per cent. received half the intended quantity; while 20 per cent. were flooded with 2,000,000 to 4,000,000 gallons, and 16 per cent. with 4,000,000 to 7,500,000 gallons. With the Fiddian system, about half the area received the intended rate, about a quarter 250,000 to 1 000 000 gallons, and the remaining quarter 2,000,000 to 2,500,000 gallons per acre daily.

Another difficulty in the management of filters results from clogging. Early in May some pooling was observed on one of the filters, and it was found that the surface layers were partly clogged with organic matter, but largely by the larvæ of a small fly (Psychoda alternata), whose presence had been noted in previous reports. These larvæ collect in the upper layers, cause the sewage to pool on the surface, and so cut off the ventilation; the flies themselves also die on the surface in large numbers. Copper sulphate was added to the sewage (830 lb. per million gallons) on four occasions, and at another time bleaching powder in the same proportion; the former had the best effect, but neither was quite satisfactory, and it was found necessary to dig over the top three or four inches of the filter surface in May and again in September to allow the sewage to pass. At the beginning of October the fly nuisance had practically ceased, but the filters were still badly clogged. Caustic soda (1000 lb. per acre) was then scattered over the surface; this broke up the clogging material, and the effluent was found to be heavily charged with organic matter. Notwithstanding the difficulty of keeping the surface of the filter open, the effluent during the summer was more highly nitrified and of better quality generally than in any summer previously. This the observers consider can only have been due to the more even distribution effected by the rotary distributer, with a resulting equalisation of work in the different parts of the bed; the increase in nitrates during May and June immediately following its installation was especially marked. Contrary to some observations that have been made in this country (e.g., those of Dr. George Reid at Hanley), progressive increase in nitrification was found to occur with increase in depth of filtering material; thus in filter No. 361, to which settled sewage was applied at the rate of 1,500,000 gallons per acre, the effluent at 2 feet depth contained 0·31 per 100,000 nitrogen as nitrates; at 4 feet, 0·71; at 6 feet, 0·96; and at the outlet, 8 feet 9 inches, 1·03. The oxygen consumed varied but little, being 3·16 at 2 feet; 3·41 at 4 feet and at the outlet; and 3·81 at 6 feet. Neither did the albuminoid ammonia vary much: at 2 feet it was 0·5186; at 4 feet, 0·5536; at 6 feet, 0·6517; and at the outlet, 0·4706.

Removal of bacteria.—The purifying power of the various types of filter was measured by determining the average numbers of bacteria developing on agar (1) when incubated four days at 20° C.; (2) when incubated 18 hours at 40° C. on litmus lactose agar; and (3) the number of red colonies on litmus lactose agar at 40° C. All the intermittent sand filters showed a removal of over 99 per cent. of all types of bacteria. Of the four contact filters, one which was badly clogged, and in which nitrification was feeble, showed a bacterial purification of 86 per cent.; while its companion, which was in good condition, removed only 0·8 per cent. of the 20° C. bacteria, and only 30·7 per cent. of the total bacteria growing at 40° C. Of the two slate filters (or rather slate beds), the one operated with ordinary sewage removed 60 to 70 per cent. of 20° C. and 40° C. germs, while the one operated with settled fresh sewage showed a removal of about one-third of the total, but none of the 40° C. bacteria. The older trickling filters, of ¼ to 1 inch material, were much more efficient than the newer ones with larger material, 1 inch and upwards.

Bacterial Purification of Water.

A new sand filter has been brought into operation at Lawrence 4½ feet in depth, the size of the grains averaging 0·25 millimetre; this has been worked at the rate of 3,000,000 gallons per acre daily. The Merrimac river water averaged 7400 bacteria per cubic centimetre during 1909, and the filter yielded water containing 100 per cubic centimetre. The old filter, constructed in 1893, having a depth of 4 feet, has been worked at an average rate of 1,250,000 gallons daily; the applied water averaged 7400, and the filtered water 60, bacteria per cubic centimetre. Thus the old filter, operated at a lower rate, gave a bacterial efficiency of 99·2, compared with 98·7 per cent. of the new one. The bacillus coli efficiency of the old filter (presence in 8·6 per cent. of 1 cubic centimetre samples) was much higher than that of the new one (presence in 17·1 per cent. of 1 cubic centimetre samples); the raw water contained bacillus coli in 100 per cent. of 1 cubic centimetre samples.

Purification by the addition of chemicals has been studied in relation to potassium permanganate and calcium hypochlorites. With the former 98 per cent. of the bacteria were eliminated by treatment with 0·5 per 100,000 for four to six hours; larger amounts and longer duration did not appreciably increase the effect. The addition of calcium hypochlorite, equal to 0·1 per 100,000 of available chlorine, for one to two hours, caused a reduction of 99 per cent., and "resulted in an effluent corresponding in bacterial quality with the effluents from the best slow sand filters." In the case of both chemical agents the reduction in number of bacteria growing at the body temperature was less than that of common water bacteria; in 20 to 25 per cent. of the samples treated with hypochlorite the counts at body temperature were actually higher than those at room temperature. This phenomenon of "reversed counts" occurs in a considerable proportion of cases in which the room temperature counts have been reduced below 200 per cubic centimetre by the use of hypochlorites, permanganates, or other oxidisers; but not in samples containing large numbers of bacteria, nor in those where the numbers have been reduced by copper sulphate or other non-oxidising disinfectants. Spore-formers are found in practically the same proportion after, as before, disinfection; but the true significance of the phenomenon cannot at present be stated. It is evident, however, that reliance must not be placed entirely on room temperature counts in estimating the purification effected by hypochlorites. Moreover, in waters so purified a large increase in total bacteria takes place on storage, varying from 100 to 7500 per cent. and averaging 670 per cent.

Among other subjects dealt with in the report are the anaerobic bacteria in milk and the prevalence of infantile paralysis; an inquiry into this disease is still proceeding. The present volume fully maintains the high standard of thoroughness and accuracy that has always characterised the series, and is equal to any of its predecessors in interest.

PLAGUE IN THE NEAR EAST.

(FROM THE BRITISH DELEGATE TO THE CONSTANTINOPLE BOARD OF HEALTH.)

Plague in Odessa.

SINCE the date of my last letter on this subject (published in THE LANCET of June 3rd, p. 1528) the plague infection has reappeared in Odessa, where, it will be recalled, it caused an epidemic of some severity last year. On June 6th (19th) an inhabitant of the town, a woman employed in business, was declared to be suffering from the disease, as shown by the result of a bacteriological examination. Three days later a second case was declared; the patient, a child, occupied the same house as the first case. On July 16th (29th) 3 further cases were seen; 2 of these occurred in the crew of the s.s. *Veronezh*, of the Russian Volunteer Fleet, and the third was an inhabitant of the Moldavanka quarter of the town; one of the former died. The steamer remained in the port for a month and then sailed for the Far East. Finally, a telegram from the Russian Ministry for Foreign Affairs, dated July 21st (August 3rd), states that in the preceding week 5 cases of plague had been recorded in Odessa, with 2 deaths. Presumably these 5 cases include the 3 just mentioned, the details of which are quoted from the Russian medical papers. No further cases occurred in the following week.

Plague in the Kirghiz Steppes.

These now well-known centres of endemic plague are still more or less active. In the *urotchistché* of Uzbek, in the 9th district of the maritime province of the Kirghiz steppes, 4 fatal cases of the pneumonic form of the disease occurred in a single family between June 5th and 23rd (June 18th and July 6th). The infected earth-huts (*zemlianki*) were burnt

and the inhabitants of the settlement, 98 in number, were kept under medical observation for a suitable period. At a date not named, but apparently some time in July, 7 Kirghiz were attacked with plague, and all died, in the *urotchistché* of Kosum. Kosum is said to be situated in the 1st circle of the Kirghiz Horde, on the frontiers of the Uralsk Province.

From other sources it is learnt that outbreaks of plague occurred in May and June at Oujaly and Saralfyn, in the Narynsk district. In the former, 4 fatal cases—all members of one family—were seen between May 7th (20th) and 27th (June 9th). In the latter, which is 12 versts from Oujaly, 3 Kirghiz, members of one family, fell ill of plague between May 26th and 31st (June 8th and 13th), and all died.

For some time past a medical commission, under the leadership of Professor Metchnikoff, and consisting of Dr. Salimbeni, Dr. Burnet, and Dr. Jamanuchi (the last named from Japan), has been investigating the disease as it manifests itself in the Kirghiz steppes. Their report is said to have been recently completed, though apparently it has not yet been published. From a reference to it in a recent number of the *Vratch*, it appears that the marmot, known in Russian as the *bobak* or *tarbagan*, does not occur in the Kirghiz steppes. It is replaced there by a similar rodent, known in Russian as the *suslik*, which would seem to be also a kind of marmot, though presumably of a different species from the other. In the neighbourhood of Kosai, in the steppes, where plague was epidemic last December (see my letter in THE LANCET of Feb 25th last, p. 534), large numbers of the runs of these animals were found close to the spot where those who had died from plague had been buried. But in no instance were plague bacilli found in the animals, though these were shown to be exceedingly susceptible to plague artificially inoculated. The *susliks* were also found not to harbour fleas; but a small tick (*klestoh*) was common enough, occurring particularly behind the ears of the animals. Some of the members of the commission, who still remain in the steppes, are pursuing their investigations into the relation of these animals and their parasites to the spread of plague. Incidentally it is mentioned that investigations were also made into the presence of tuberculous disease in these regions. In 50 per cent. of some 3000 instances in which the skin reaction was taken, the result is said to have been negative—which presumably implies that it was positive in the other 50 per cent. In some places, notably in the Kalmuck bazar near Astrakhan, as many as 75 to 95 per cent. gave positive reactions.

Plague in Adalia.

There has recently been a revival of sporadic plague at Adalia, on the southern shores of Asia Minor, where similar outbreaks have occurred annually for the last few years. The first case was seen on July 4th; the patient was a labourer in a mill; he died the same day. The next case was reported on July 17th; the patient was a sergeant-major in the army, living in the same quarter as the first case; he also died. On July 30th, a third case was reported; the patient was a Kurd, a municipal street-sweeper; he had been ill for two days, and was already dead on arriving at the hospital on the 30th. A fourth case followed on August 1st, and a fifth on the 2nd. All these cases were of the bubonic variety of the disease.

Plague in Muscat.

The following figures are in continuation of those published in my last letter:—

Week ending May 13th	.....	5 cases,	5 deaths.
,, ,, ,, 20th	.....	5 ,,	5 ,,
,, ,, ,, 27th	.....	3 ,,	2 ,,
,, ,, June 3rd	.....	0 ,,	0 ,,

Finally, Muscat was declared free of plague on June 15th.

Plague at Bushire.

Since the last figures were published the following returns have been received from Bushire:—

Week ending May 13th	.....	12 cases,	7 deaths.
,, ,, ,, 20th	.....	24 ,,	23 ,,
,, ,, ,, 27th	.....	17 ,,	16 ,,
,, ,, June 3rd	.....	16 ,,	13 ,,
,, ,, ,, 10th	.....	? ,,	? ,,
,, ,, ,, 17th	.....	9 ,,	11 ,,
,, ,, ,, 24th	.....	8 ,,	? ,,
,, ,, July 1st	.....	0 ,,	1 ,,

Finally, Bushire was declared free of plague on July 5th.

Plague in Bahrein.

The outbreak of the disease in the Bahrein Islands recently took on a very severe character. It will be recalled that down to May 5th, 30 deaths from plague had occurred there. On May 18th it was reported that 175 cases had been seen down to the 14th of that month. On June 15th a telegram was received from Bushire stating that in the 15 days ending May 29th the mortality from plague in the islands was estimated at about 700 deaths, followed by about 600 others in the "13 days ending June 29th." There appears to have been an error in the transmission of this telegram, the last-named date being obviously wrong, as the telegram was dated June 15th. In the same telegram it was stated that plague was present on the Arabian shores of the Persian Gulf, known as the Trucial coast; that it had been severe at the beginning, but was then declining. A later telegram, dated June 29th, reported that about 300 deaths had occurred in Bahrein during the 15 days ending June 25th. Later telegrams show that there were 110 deaths there in the fortnight ending July 9th, and 10 deaths in the week ending July 16th. No subsequent deaths were reported, and on August 3rd the Bahrein Islands were declared plague-free.

Plague at Basra.

As already reported, 2 cases of plague occurred here on May 6th and 11th respectively. On May 14th a third case followed, the patient being a baker, living close to the other cases. About the same time it was reported from Basra that ships' captains arriving there from ports on the Trucial coast confirmed the existence of an epidemic of plague on that coast, of which mention was made above. No details of that epidemic have, however, as yet been received. On May 19th and 22nd 2 more cases occurred in the infected quarter of Basra, and another one on May 31st. There were 4 deaths in this small outbreak at Basra.

Constantinople, August 19th.

THE BRITISH DENTAL ASSOCIATION.

ANNUAL MEETING.

WE lately published[1] an account of the meeting in London of the Eleventh Annual Session of the International Dental Federation, which by gathering annually in various capitals arranges for the meetings every five years of the International Dental Congress. This year the delegates were the guests of the British Dental Association, which held its thirty-first annual meeting at the University of London on August 3rd, 4th, and 5th, with special receptions by the Royal College of Surgeons of England at its building, and at the Hotel Cecil and other places arranged for by the large and important metropolitan branch of the association.

As the new President of the association for 1911-12, Mr. W. B. Paterson, senior dental surgeon at St. Bartholomew's Hospital, also is the President of the International Dental Federation, it was but natural that distinguished representatives of the profession from abroad should linger in our metropolis and make common cause with British dentists in discussing many important questions regarding the education of our dental *confrères* and the part they can take in State provision for better oral conditions among the young, the poor, and the great national services.

Greatly appreciated by dental practitioners was the interest shown by the President of the Royal College of Surgeons of England, Sir Henry Butlin, and the Council of the College who placed at the disposal, not only of the International Federation, but also of the British Dental Association, the building of the College, with its unrivalled museum, so rich in odontological specimens. The coincidence of the international meeting with the annual meeting of the British body, and the fact that the President of the Federation was also President of the Association—having been during 21 years successively honorary secretary and chairman of the representative board—accounted for an annual meeting this year in London which was by far the largest ever held. With a total membership now of about 2020, there were in London at least 1000, including visitors and ladies; and as the association comprises a good majority of all medically qualified dentists, the annual deliberations of the body must necessarily command serious attention.

[1] THE LANCET, August 19th, p. 529.

Among the formal annual reports made to the meeting that of the representative board dealt at some length with such questions as the need of better and more precise legislation in the interests of both the public and the profession, as shown by the opinions of high judicial authorities, the revelations of the recent Blue-book on unqualified practice, and the well-known great increase of an amount of irregular and totally incompetent "dentistry" never contemplated by the promoters of the present Dentists Act or by Parliament when it was drafted; also the position of the profession in assisting with the examination and treatment of school children under recent enactments.

Dental Treatment of School Children.

Upon the latter important matter, in which the coöperation of dental and medical practitioners is acknowledged to be essential, the board report said:—

As a proof that the importance of dental treatment is recognised by the highest authorities, it is satisfactory to be able to point to the special chapter on the subject in the Second Annual Report of the Chief Medical Officer of the Board of Education, in which several recommendations of the association are adopted. An experimental clinic has been started by the London County Council in connexion with the Poplar Hospital, and a half-time dentist appointed; and at Deptford a clinic, which owes its inception to private munificence, receives L.C.C. school children. No system of dental treatment at any of the large general hospitals on the lines of the experimental scheme of medical treatment has been instituted, and as nearly all the dentists attached to such hospitals are of opinion that this method is inadvisable, it is unlikely that anything of the kind will be attempted. The views of the association on the best means to be adopted have been submitted to representatives of the L.C.C. by members of the committee appointed for the purpose. Assistance has also been given to the Medical Committee of the Wandsworth clinic in drawing up plans for the inclusion of dental treatment, and it is hoped that such treatment will before long be instituted. Similar assistance has been afforded to the dentists of Norwood in connexion with the medical clinic in that district, and has also been submitted for the consideration of the Mid-Kent Organisation Committee.

In the provinces dental clinics have been started at Bradford and Norwich, a whole-time dentist will shortly be appointed at Coventry, and other towns are in process of making arrangements; an interesting experiment is being tried in West Dorset, the first strictly rural district to attempt dental treatment, where an itinerant whole-time dentist has been appointed. It is to be hoped that more may be done in the near future to inculcate the principles of hygiene of the mouth and prevention of dental caries by the organisation of instruction to teachers in training colleges, the regular inclusion of dental hygiene in school teaching, and lectures to parents.

Upon this subject the President (Mr. Paterson) in his inaugural address said:—

Long before Mr. John Burns passed his Medical Inspection Act of 1907 this association had been engaged in the collection of statistics relative to the condition of the teeth of the children of the public elementary and primary schools in various parts of the kingdom; and I have reason to believe that the results of our investigation were not without their uses at the Local Government Board in the preliminary considerations preparatory to the passing of that very important Act—an Act which is already working a silent revolution throughout the country, and one which in the future will have very far-reaching and beneficial effects upon the public health. Sufficient medical inspection of school children's teeth has now been accomplished, and the need of dental treatment is clearly and unmistakably indicated. We know that go where you will throughout the kingdom the teeth of the children require to be saved.

On the subject of the public dental hygiene for schools, the question of the day is, Which is the simplest and best way of setting about the business? In England Cambridge abroad Germany and Sweden, point the way. The school dental clinic appears to be the simplest, best, and most economical means at command. Professor Jessen tells me that they have already established 120 school clinics in the leading cities and towns of Germany. We have, in our association, for long pressed forward the claims of the school clinic, and the only barrier to progress has been the difficulty of finding the money, but now that the State Insurance Bill has turned all men's thoughts towards the financial aspects of public health, we may hope soon to see that barrier removed.

Our honorary secretary, Mr. Norman Bennett, who takes a very keen interest in all dental matters which relate to public health, deserves a special word of recognition and thanks. He has had an active time since the Inspection Act came into force answering questions addressed to our association by various public bodies on the subject of school dentistry and dentists. My knowledge of his answers leads me to say that he has his finger on the pulse of the dental hygiene movement, and that our interests are quite safe in his hands. I am glad of this opportunity of paying my tribute of respect to my colleague's sagacity in such matters, as many of them, owing to his innate modesty, never come within your view.

Whilst doing what we can as an association to direct public attention to the question of dental hygiene at home, we have not neglected the opportunity presented by the Dresden Hygiene Exhibition of enlightening our brethren abroad on our doings. We have recently sent to the British Section of that important exhibition a small and simple yet useful exhibit of the dental outfit of a Poor-law school clinic, and also copies of the association's literature, charts, and case-books in connexion with the care of children's teeth. I am told by those who have seen the exhibition that if Dresden was always worth a visit for art and music, it is trebly so now that a health exhibition is included.

The Care of the Teeth in the Services.

A considerable part of the President's address was devoted to the position of dentists in the naval and military services. As the official representative of the Dental Association upon the Army Medical Council's Advisory Board, and thus speaking with authority and experience, he said:—

You may remember how the British Dental Association was hurriedly called upon to arrange a dental service for the troops in the South African war. This service was so successful that it was increased in numbers during the war and maintained for some years after the war in the home establishment. Throughout its existence I constantly read the records of its work and the good reports of commanding officers, principal medical officers, and the complimentary official reports of three successive directors-general of the Army Medical Department. We know the subsequent turn of events. How during the piping times of peace the service of contract dental surgeons was allowed to languish. How it was made to appear superfluous, and finally to cease. What would happen to our troops in war, or in training manœuvres lasting for, let us say, a period of not less than two months, with no other dietary than that provided in a war ration of "bully beef and biscuit"?

In the navy matters are slightly better. A few contract dental surgeons are employed at the chief naval bases. But the service offers no permanency, and is crippled by a Treasury with a tight purse. How differently has the question of army dentistry been dealt with in the United States of America. There dentistry has been placed upon a permanent footing in connexion with the Army Medical Corps. By the new Act, dental surgeons now take rank as first lieutenants with pay and allowances accordingly. The regular pay is £400 a year with quarters, or in lieu of quarters £7 a month. There is longevity pay, amounting to a 10 per cent. increase on the regular pay, every five years for 20 years; and there is extra pay for foreign service of 10 per cent. on full pay.

Various Matters.

At the general meeting of members the principal subject of discussion was the action to be taken respecting the introduction of fresh legislation in amending the present law as to dental registration, practice, and the protection of title. Although a draft Bill has for some time occupied the attention of special committees, and had been remitted by referendum to the whole association, it was decided after a full discussion to again remit to the representative board the whole subject for further consultation and redrafting.

The retiring President, Mr. W. H. Waite of Liverpool (who was unfortunately not able to be present), was elected a Vice-President, and the following were elected honorary members: Dr. W. H. Williamson of Aberdeen, a former president; Mr. J. Dennant of Brighton, joint founder with Mr. Waite of the benevolent fund; Dr. G. V. Black of Chicago, who obtained the I. D. F. Miller prize; Professor O Walkhoff of Munich, president of the International Dental Congress in Berlin in 1909; Dr. E C. Kirk, Dean of the Faculty of Dentistry in the University of Pennsylvania and editor of the *Dental Cosmos;* and Professor E. Jessen of Strasburg, the pioneer of school clinics.

At the annual dinner at the Hotel Cecil on Thursday evening, among distinguished visitors were Sir Frederic W. Hewitt, Sir A. Pearce Gould, Sir R Havelock Charles, Professor Sidney H. C. Martin, Dr. Norman Moore, and many foreign guests. There were many provisions made for the entertainment of ladies by a committee presided over by Mrs. Paterson, which included a special ladies' dinner and a joint entertainment at the hotel after the banquets.

On Friday great interest was taken in papers on scientific and practical subjects (printed in advance and usually taken as read, so allowing of good discussion), and there were many demonstrations and exhibits in the halls of the University of London.

A feature of the meeting was a select museum, including orthodontic models, clinical cases, and specimens of students' work from American schools. A number of specimens from the museum of the Royal College of Surgeons of England on periodontal diseases were demonstrated.

The invitation of the Scottish Branch to hold the 1912 meeting in Glasgow at the University, on August 7th, 8th, 9th, and 10th, was cordially accepted.

ASYLUM REPORTS.

Nottingham City Asylum at Mapperly Hill (Annual Report for the Year 1910).—At this asylum the average number resident for the year was 818. In addition to the number resident at the end of the year 20 females were boarded out at the Storthes Hall Asylum. The admissions numbered 177 and were above the average as regards the males and below the average as regards the females. The character of the cases which were admitted was for the most part of an unfavourable type, having regard to the prospect of recovery, 6 being imbeciles, 23 general paralytics, 12 senile cases, 15 incurable dements, and 8 cases in which

insanity had lasted over 12 months when the patients were admitted. It would appear that alcohol was the cause of the illness in 25 4 per cent., mental stress and poverty in 23·6 per cent., hereditary predisposition in 14·8 per cent., old age in 7·1 per cent., and influenza in 4·1 per cent. of the admissions. Eighty-seven patients were discharged, and of these 72 were recovered, being 42·6 per cent. of the direct admissions. In 93 per cent. of the recoveries the duration of the illness before admission had been under three months. There were 78 deaths, being a percentage of 9·5 on the average number resident. Nineteen deaths were from general paralysis and 18 from phthisis. Post-mortem examinations were made in 93 per cent. of the deaths.

Staffordshire County Lunatic Asylum at Stafford (Annual Report for the Year 1910).—The daily average number resident was 874. At the end of the year there were no vacancies for women patients, and it appears that further accommodation will soon require to be provided. There were 241 admissions, and of these 11 men and 16 women had previously been under care. The discharges numbered 134, of whom 33 men and 31 women had recovered, giving a percentage of 31·68 of the cases admitted. There were 101 deaths, giving a percentage of 11·55 of the average number resident. Twenty patients died under three months' residence. Post-mortem examinations were held in 63 cases.

Staffordshire County Lunatic Asylum at Burntwood, near Lichfield (Annual Report for the Year 1910).—The number of patients received at this asylum, together with the low death-rate, has obliged its authorities to transfer some of the patients to the other asylums of the county, but, nevertheless, there are 26 patients in excess of the number for which the asylum provides statutory accommodation. The average daily number on the registers was 889. Admissions numbered 281. One hundred and fifty-seven persons were discharged during the year, and of these 71 were recovered. There were 84 deaths, giving a percentage of 7·31 of the total number under treatment.

Staffordshire County Lunatic Asylum at Cheddleton (Annual Report for the Year 1910).—The average daily number on the registers was 977. At the end of the year the female side of the asylum was full. There were admitted 269 cases, of whom 185 were already chronic. Among the non-recoverable cases there were 33 general paralytics, as against 20 admitted during the previous year. Eighty-three persons were discharged, and of these 57 were recovered. Deaths numbered 125, 32 being from tuberculosis, 13 from general paralysis, 15 from pneumonia, 15 from dysentery, 1 from enteric fever, and 37 from chronic degenerative disorders. Dr. W. F. Menzies, the medical superintendent, is of opinion that the type of dysentery obtaining at the asylum is acquiring increased virulence. A common predisposing cause has been observed to be sudden changes in temperature, for warm weather preceded by cold disposes to bacteriological changes in food-stuffs, while cold weather after warm tends to produce chills among the patients. The vogue of open windows, however advantageous to the general asylum population and to tuberculous cases in particular, is bad for dysenterics. It is certain that a large number of persons are carriers, and it will probably be some time before these are all discovered by bacteriological and clinical research. During the year all the dysenteric cases have been examined bacteriologically, and perhaps the outstanding result has been the variety of micro-organisms found. The Flexner bacillus proved to be the organism most commonly present. As regarding treatment, sera and vaccines have been used, but it is plainly too early to form a judgment of their value. Dr. Menzies is now treating the patients by draughts and enemata of potassium permanganate solution.

West Sussex County Asylum at Chichester (Annual Report for the Year ending 1910).—The average daily number on the registers was 763. There were 154 admissions. Of the females admitted 53·8 per cent. were regarded as possible or probable recoveries, while of the males admitted in 65 56 per cent. the chances of recovery were considered to be very remote. Of etiological factors heredity, so far as could be ascertained, was present in 39·74 per cent. of the cases. Sixty-three patients were discharged, of whom 42 were recovered, the rate on the direct admissions being 30·65 per cent. In nearly all the recoveries the duration of the attack on admission was less than six months. There were 80 deaths, and necropsies were held in all cases except two. The death-rate on the daily average number resident was 10·48 per cent. Seventeen deaths were due to tuberculous disease and 18 to general paralysis.

THE TREATMENT OF WOUNDED SOLDIERS IN TIME OF INVASION.

WE have received from a correspondent at the recent manœuvres of the 2nd London Division of the Territorial Force at Shorncliffe the following interesting and instructive account of the working of the medical arrangements, with pertinent remarks on a few lessons to be drawn therefrom. Our correspondent writes:—

The Forces Engaged in the Sham Fights.

Few medical men have any clear idea of how wounded soldiers would be treated in this country in the event of invasion, and therefore an account of what might be described as as a full dress rehearsal, which recently took place at Folkestone, may be of special interest to members of the medical profession, as it was on a much larger scale than has ever yet been attempted. The 2nd London Division of the Territorial Force, some 11,000 strong, under Major-General Vesey Dawson, C.V.O., were encamped in the neighbourhood of Shorncliffe, and as on several days there were sham fights it was decided to have a great many imitation casualties on one day, to give practice to a field ambulance and the members of any voluntary aid detachments (V.A.D.'s) who might be willing to coöperate. A field day had been arranged for Friday, August 18th, between two forces—"Whiteland" and "Greenland"—in the neighbourhood of Cæsar's Camp. As the "Whites" were on the south near Folkestone it was decided to fall out the casualties from this force. "White," as a matter of fact, was defeated, and the number of casualties, if bullets had been used, would have been at least as many as were actually dealt with. Colonel Andrew Clark, K.H.S., administrative medical officer 2nd London Division, was in charge of arrangements of the R.A.M.C. (T.) and Lieutenant-Colonel J. W. T. Gilbert, of Folkestone, of the V.A.D.'s. Each casualty, as he fell to order, was to have attached to him a tally giving a brief description of the injuries he had received, and although this arrangement was not carried out quite as it was intended, nearly 100 officers and men became casualties.

Field Ambulance Work.

The wounded received first aid from the regimental stretcher-bearers, superintended by the regimental medical officers. They were then carried back (or walked back if the injuries described permitted it) until the bearers of the 6th London Field Ambulance were met with. These took over the cases and proceeded to one or other of the two advanced posts of the ambulance, which were situated respectively at Wingate Farm and the "Valiant Sailor." Here they were attended to by the medical officers and men and, when necessary, given beef-tea, &c. They were then placed in the ambulance wagon and a spare motor-car, and taken to the Tent Division (formerly called the Field Hospital) of the Field Ambulance, which was situated about a mile in the rear at Lime Kiln Farm, where there were a fully equipped operating tent and a few bell tents. Here the patients were placed in the bell tents and urgent operations would have been performed if necessary.

Rest Camps.

Information was then received that severe fighting was proceeding elsewhere, and the Field Ambulance was ordered to evacuate all wounded and march. In the same field as the Tent Division, but at a supposed distance of three miles, there was established the first rest camp of the V.A.D.'s, whence the men of the male V.A.D.'s set off with stretchers to fetch in all serious cases, the others walking (as they would have to do on active service). As the wounded arrived they were taken charge of by a medical man and members of the female V.A.D.'s. Their dressings were readjusted if necessary, and they were taken by carts to the second rest camp, where bivouacs were erected and where they remained until transport was

available. The third rest camp was established at the Black Bull-road Board School, and was of the nature of a temporary hospital. An excellent operating theatre fully equipped was established, and the class-rooms were turned into wards. A careful examination of this rest camp showed that nothing had been neglected; the sanitary veniences were excellent, and the way in which beds and operating theatre had been improvised showed that we can place great reliance on some, at least, of the V.A.D.'s. Each detachment appeared to have its fully trained nurse, and the members carried out her directions faithfully. There was a lack of medical men present, but no doubt plenty would be available if the occasion were a real one. There was no lack of trained cooks, and even every visitor was supplied with hot soup.

In actual warfare the more seriously wounded patients would have been transferred from this temporary hospital to an ambulance train at Folkestone and sent thence to the Territorial General Hospitals, which would be established in London at various institutions, such as the London University or the Prudential Buildings; but as each general hospital has to have at least 520 beds the buildings which are suitable and available are few.

Observations on Various Points.

A rehearsal on this scale allows one to obtain some idea as to how matters would proceed in a real action, and to point out details in which alteration is needed. First, as to the field ambulance: owing to lack of special knowledge of map-reading on the part of its officers and to the absence of compasses, the Field Ambulance took a wrong road, and was therefore very late in arriving at its appointed stations. Other difficulties arose from the fact that for economy the Field Ambulance receives in peace time less than one-third of its mobilisation equipment and forces, and even then its general service wagons and forage cart are not the real things, but hired carts, which are much less convenient. Again, the distribution of the available officers should be such that at the Tent Division at least sufficient officers to undertake operations should be present. The Territorial Royal Engineers fixed up telephonic communication between the three stations of the Field Ambulance, but as this could rarely happen in warfare the Field Ambulances should be put in possession of better means of intercommunication than they at present possess.

Secondly, as to the V.A.D.'s. It was absolutely astonishing to see how well the various detachments (some St. John Ambulance and some Red Cross) which came from all parts of Kent worked together, and their cleverness in improvising whatever came to hand was notable. But a few points need criticism. Four or five nurses are not required to each cart of wounded; men with gunshot wounds would not usually be able to stand up to be dressed, and lightly wounded should be made to walk. But these points are, of course, of minor importance.

Finally, in all cases of sham fights one or two real accidents are to be expected, and that these may be passed back without delay to the military hospital, taking precedence of imitation casualties, they should have special tallies. On this occasion one such case was overlooked.

BRITISH MEDICAL BENEVOLENT FUND.

AT the August meeting of the committee 15 applications were considered, but only very inadequate help could be given as the treasurer reported that the grant account was already overdrawn to the extent of £90. Grants amounting to £96 were made to the most distressing of the cases, so that the total deficit is now nearly £200, and the reserves will have to be still further drawn upon. Numerous appeals are always received during the last quarter of the year, and the committee therefore urgently begs for support to enable them to be dealt with. Contributions may be sent to the honorary treasurer, Dr. Samuel West, 15, Wimpole-street, London, W. Appended is an abstract of the cases assisted:—

Widow, aged 44, of L.R.C.P., L.R.C.S. Edin. Husband's savings exhausted by a five years' illness, ending in death, and applicant's only income is the interest on the money received from a small life policy. Tries to make both ends meet by taking boarders, but at present has none. Two children, aged 10 and 9, the elder at an institution and the younger recently elected to one. Voted £10.

Widow, aged 47, of M.R.C.S., L.R.C.P. No income, no children, and hopes shortly to find a suitable post. Voted £5.

Widow, aged 37, of M.R.C.S., L.R.C.P. Two children, aged 6 and 4, and dependent on a small monthly allowance from a sister and occasional earnings from sewing and painting. Has been obliged to part with most of her furniture. Voted £10.

Widow, aged 41, of M.B., C.M. Aberd. Quite unprovided for at husband's death a few years ago. Endeavours to support herself by letting lodgings. Two children, one at an institution. Relieved four times, £34. Voted £12.

Daughter, aged 63, of late M.R.C.S., L.S.A. Maintained herself as a dispenser until no longer able to find work as such, and now dependent on small occasional earnings by wood carving and slight help from a sister. Relieved five times, £50. Voted £10.

Daughter, aged 60, of late F.R.C.S. Has acted for many years as companion, housekeeper, &c., but for some time past has not been able to obtain a suitable post, and has consequently spent her small savings. Relieved twice, £10. Voted £2, and case to be reconsidered at next meeting.

L.R.C.P. Edin., aged 66. Has been incapacitated by ill health for the last two years, and is dependent on help given by a brother. Children unable to help. Relieved twice, £36. Voted £16.

Daughter, aged 68, of late L.S.A. No income and in very feeble health. Relieved four times, £40. Voted £2, and case to be reconsidered at next meeting.

Widow, aged 55, of L.R.C.P. Irel. Since husband's death has maintained herself by nursing, &c., but has been in bad health for some time past; is now in arrears for rent, and has been obliged to dispose of some furniture and clothing. Relieved twice, £20. Voted £5, and case to be reconsidered in October.

Daughter, aged 55, of late M.R.C.S. No income, and practically incapacitated. Relieved nine times, £85. Voted £12.

Widow, aged 54, of L.R.C.P., L.R.C.S. Edin. Receives slight help from relatives, and earns a few shillings a week by writing for newspapers. Two children, of whom the elder will soon be self-supporting. Relieved six times, £62. Voted £10.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

The Public Health of Calcutta.—In presenting his report for 1910 Dr. T. F. Pearse, the health officer of Calcutta, mentions that in previous reports the population of the city had been estimated on the supposition that an increase had taken place since the Census of 1901, and in the same ratio as in the previous decennial period. When the Census was taken, however, in the present year it was found that actually a considerable decrease had occurred, owing to movement of population into the suburbs. The population, as now estimated for 1910, is stated as 886,000, but the rates of mortality, &c., have been calculated on the population of 1901—viz., 847,796. The slight increase in the past nine years has been due to immigration, there having been no natural increase, but, on the contrary, an excess of deaths over births to the extent of 145,634 during the ten years. The birth-rate was 19·3, a very low figure compared with that for India generally (38·64, mean of the last quinquennium), but in Calcutta females constitute only one-third of the population. The total death-rate was 27·9 per 1000, the lowest recorded for over twenty years; corrected according to the new Census returns, it was 26·7. The reduction is chiefly due to diminished mortality from cholera, plague, and small-pox, and applies to every district in the city. It is noteworthy, however, that the death-rate in the suburban area was 38·0, as compared with 24·8 per 1000 for the urban area, the former having shared in the general improvement to a much smaller extent than the latter. The mortality from cholera (2·13) was the lowest recorded for ten years. Plague also was much less fatal than in any year of the decennium, the death-rate being only 1·4 per 1000. In 1909 there had been a severe outbreak of small-pox; in 1910 the city was almost free from this disease, only 48 deaths having been recorded. It is noted that the age for compulsory vaccination has now been reduced to six months, which ought to reduce the infant mortality in the future. Beriberi had been prevalent in 1909, and the outbreak continued through the spring of 1910, the total deaths having numbered 171, of which 143 occurred in the four months January to April. Hindus suffered more than Mohammedans, and females more than males. Dr. Pearse does not subscribe to what he calls "the extraordinary theory" that this disease arises from deficiency in the dietary due to the process of milling of the rice and wheat used by the Bengalis. "It does not explain the sudden outbreak at the Alipore Reformatory, and its extension over the city, the subsequent subsidence, and the sudden recrudescence of a still more severe character in the following year (1909), with

a much reduced incidence during 1910. The rice and wheat used by Bengalis have been prepared in the same manner for many generations." Enteric fever appears to be on the increase, but probably this is due to improved diagnosis and the fuller inquiries now made in fever cases. There were 330 deaths, chiefly in the northern part of the city. The ratio is 0·38 per 1000. Malaria has been declining since 1905, the mortality ratio being now only 1·7 per 1000, but there was greater prevalence in suburban Calcutta than in the northern half of the old city. Tuberculosis (chiefly phthisis) caused a mortality of 2·3 per 1000, the incidence on females (3·2) being much greater than on males (1·8). There is little variation from recent years. Dr. Pearse thinks that the chief hope for any reduction lies in improved sanitary conditions, especially in freer ventilation for dwellings; he recommends the establishment of tuberculin dispensaries. The drinking water-supply for Calcutta is filtered through sand-beds at Pulta. The total bacteria found were generally below 100 per cubic centimetre; bacillus coli could be detected in from 1 to 5 c.c. generally, but in the drier months not in 20 c.c. The construction of tanks for storage of water previous to filtration may be taken into consideration. Dr. Pearse draws attention to the very dangerous and out-of-date method of washing the sand for filtration that is still practised; "coolies stand waist deep in an underground tank and stir up the dirty sand in unfiltered river water." This procedure is inexcusable in the capital city of the Indian Empire, and might at any time lead to dangerous contamination of the water. Mechanical sand washers should be provided. Dr. Pearse also recommends the construction of additional sedimentation tanks. Much good work appears to have been done by a female sanitary inspector, who has been employed as an experimental and temporary measure since 1908. It appears, however, that the corporation hesitates to make the appointment a permanent one. This is to be regretted. The great value of these officers is now thoroughly recognised in this country, and in the East there is even greater scope for their employment among the female population. Other important sanitary recommendations made by Dr. Pearse are the construction of model dwellings for the poor, clearance of insanitary areas, improvement of lines of communication, and the provision of a better supply of filtered water for the interior of the native quarters. The sanitary charge of a huge city like Calcutta is, indeed, a task of the greatest difficulty.

REPORTS OF SCHOOL MEDICAL OFFICERS.

Tottenham Education Committee.—Dr. J. F. Butler-Hogan's school report for the year 1910 lays great stress upon the value of the feeding of necessitous school children, but raises the question of the supply of the right kind of food, suggesting the provision of a central cookery depôt from which food could be supplied to all places where meals are served. This would secure an improvement in the quality of food provided, and do away with the possibility of invidious comparison of one district's cooking with another. Of all children for whom medical treatment was considered necessary, 63 per cent. are reported as having received professional attention. The percentage varied in different schools, and even in different departments of the same school, very much in this respect depending upon the cordiality and energy of the teacher's coöperation. Reviewing the whole matter, Dr. Butler-Hogan continues that it is practically impossible for the cases most seriously needing treatment to obtain it, and writes: "It is those diseases which are most serious for the children, which interfere most with attendance, and therefore with the school grant, that are unfortunately left untreated, owing, in many instances, to the negligence of the parents, but often through their sheer inability to procure, in any form, the necessary medical attendance." These considerations lead Dr. Butler-Hogan to consider in detail the whole question of treatment of school diseases, and to discuss from every point of view the question of supplying special treatment in a "school clinic." The report outlines the conditions necessary for the establishment of such a school clinic, these being quoted largely from the report of Dr. L. A. Williams, school medical officer of Bradford, pointing out that objections to such clinics are purely theoretical, and somewhat imaginary. The discussion is thorough and should prove valuable both to medical officers of schools and members of education authorities.

County Borough of Brighton.—The annual report for 1910 of Dr. Duncan Forbes and Dr. J. Lambert, school medical officers, shows that the number of children inspected in Brighton was 6273, and of these 2312 were found to be in need of some form of medical advice or treatment. An interesting survey of the methods available for the treatment of defects shows that a large percentage of children suffer from ailments which are not treated, as a rule, by private practitioners—for example, children suffering from ringworm of the scalp, those in need of spectacles, and those requiring the removal of tonsils and adenoids. It is pointed out that the majority of children requiring spectacles, or the removal of adenoids and tonsils, "are patients of practitioners doing large practices amongst the poor. Even if those practitioners cared to specialise in the required directions, the parents could not afford to pay them adequately for their work. To make it worth doing, therefore, the Education Committee would need to pay a part, if not the whole fee." A consideration of these facts led to a meeting of the local branch of the British Medical Association on Nov. 18th, 1910, when details of a scheme for treatment of school diseases suitable for Brighton were laid before members of the elementary school subcommittee. This meeting dealt with a larger scheme, but a small school clinic is in the fifth year of its existence in Brighton, and is held once weekly on Tuesday afternoons, at 5.30, in a room of the special school. The conditions treated are diseases of the skin and scalp, verminous conditions, and eczema; in addition, blepharitis, conjunctivitis, and certain other conditions are dealt with. Cases of other diseases are sent down for examination by teachers, but these are more frequently dealt with at the Public Health Office. These are the classes of case found to be most neglected in ordinary school work everywhere, and for which ordinary agencies do not suffice. When we add to these the cases previously mentioned, it would seem that there is a distinct field for the clinic quite apart from the ordinary province either of hospital work or private practice. Moreover, the need for dental treatment makes the necessity for the clinic much more pressing. An interesting experiment is that of training girls in domestic work in a model home in which several of the teachers reside, thus securing actuality in the conditions. The girls are required to carry out the whole of the housework, and it is expected that the experience gained will be very valuable in enabling them to obtain employment promptly on leaving school and in equipping them for their own home duties in the future. Investigations have been carried out during the year on the prevention of dust in schools by the application of oil preparations to the floor. The exposure of culture plates has demonstrated that the use of such preparations is a very great improvement upon the ordinary methods of "cleansing" not only floors but furniture. Another experiment is the provision of a special class for "intermediate" children whose development is between backwardness and actual mental deficiency. More elaborate subdivision and special grouping of children are required in school work, and every experiment in this direction is very valuable. It is these intermediate children who are the difficulty, as also in another way are the "semi-deaf" and the high myopes. None of these groups can be satisfactorily taught either in the ordinary or in the special classes; attempts to separate them are therefore particularly helpful.

City of Birmingham Education Committee.—Dr. G. A. Auden's report contains an interesting survey of the ameliorative agencies which have to do with child life, both before and during school age. These include infant health supervision in all its forms, one of them being a guild of mothers, where meals are provided for expectant mothers, and where the children are carefully looked after at birth. During school age there are the special care committees, established in connexion with four schools (voluntarily), the Women's Settlement, and the National Union of Teachers Children's Charity Fund. A list is given of the general curative agencies, hospitals, dispensaries, &c., also of special educational institutions and general ameliorative agencies (among these sanatoriums, the Charity Organisation Society, and a police charity), also after-care committees. The medical officer points out in urging the establishment of care committees, as they already exist in London, that all of these institutions affect the schools and should be grouped and coördinated with the schools by means of the care committee organisation. It is also stated that considerable as

the great stream of charity implied by all these agencies is, there are yet great gaps, as, for instance, in the treatment of tonsils and adenoids, defective teeth, ringworm, and eye troubles. The care committees by supplying the coördinating mechanism would make it possible to fill up these gaps, and, as the medical officer says, "would go far in supplying the initial coördination, which is necessary, and would allow the problem to be attacked from the point of view of the home." It must be remembered, however, that in London, where care committees are already established, attempts on the part of the care committees at coördination have not been very successful, and can only be effectual if the school clinic is added—that is to say, the school clinic appears the centre around which all the various ameliorative agencies must be coördinated, the care committee being merely the mechanism bringing the agencies to that point. Voluntary institutions can, in fact, be best used in association with these committees. Experiments on dust prevention in schools have been carried on in Birmingham, and their result points strongly in the direction of the value of oil preparations applied to the floors. A good feature in Birmingham, which other authorities might well copy, is the provision at Floodgate-street council school of a well-equipped school bath. The excellent photograph reproduced gives one a very pleasant impression, as does also, by the way, the picture of the combined hammock for use in infant schools for the "baby room."

East Suffolk County Education Committee.—Interesting comparisons of different parts of the county as regards clothing, nutrition, and defects are made, and some important differences in measles as between town and country school populations are brought forward.

County Borough of Hastings.—The report of the schools in Hastings is chiefly remarkable for consisting only of three-quarters of a page of print. 2770 children were examined, but no special school medical information is given beyond a bare recital of figures.

Great Yarmouth Education Authority.—The table by the school medical inspector, Dr. H. W. Harding, gives an instructive comparison between height and weight and standard for different age groups. Superior physique is found in the superior standard, and this Dr. Harding attributes to higher standard of home life, implying in this "all details entering into the boys' surroundings while out of school."

Hull Education Committee.—By October, 1911, the medical officer reports that the whole of the children attending school will have been inspected. In 1910 18 824 children were examined, 4996 notices to parents regarding treatment issued, but the result was only recorded in 954 cases. A medical register in each department would secure a more adequate record. Some interesting statistics of nutrition are tabulated.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns 8146 births and 6368 deaths were registered during the week ending Sept. 2nd. The revised estimate of population of these towns in the middle of this year is 16,157,797 persons. The annual rate of mortality in these towns, calculated on this revised estimate, which had steadily increased from 11·8 to 21·2 in the seven preceding weeks, declined to 20·6 per 1000 in the week under notice. During the first nine weeks of the current quarter the annual death-rate in these towns averaged 16·3 per 1000, while in London during the same period the mean annual death-rate did not exceed 15·3 per 1000. The recorded annual death-rates in the 77 towns last week ranged from 10·4 in Northampton, 11·4 in Barrow-in-Furness, 11·6 in Leyton, and 11 9 in Croydon, to 29·8 in Wigan, 31·4 in Bolton, 33·8 in Burnley, and 36·8 in Stoke-on-Trent. The 6368 deaths from all causes in the 77 towns last week were 200 fewer than the number recorded in the previous week, and included 2617 which were referred to the principal epidemic diseases, against numbers increasing from 268 to 2900 in the nine preceding weeks. Of these 2617 deaths from the principal epidemic diseases no fewer than 2461 resulted from infantile diarrhœa, 58 from whooping-cough, 35 from diphtheria, 34 from measles, 21 from enteric fever, and 8 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 8·4 per 1000, against 8·8 and 9·4 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœal diseases in the 77 towns, which had increased from 70 to 2714 in the nine preceding weeks, declined last week to 2461, and caused the highest annual death-rates of 15·3 in Bolton, 16·0 in Grimsby, 16·4 in Bootle, 16·6 in Burnley, and 21·3 in Stoke-on-Trent. The deaths referred to whooping-cough, which had been 46 and 68 in the two previous weeks, declined to 58 last week, and included 16 in London and its suburban districts, 5 in Liverpool, 4 in Newcastle-on-Tyne, 3 in Preston, and 3 in Sheffield. The fatal cases of diphtheria numbered 35, and were equal to the average number recorded during the five preceding weeks; 10 deaths were registered in London, 5 in Liverpool, 4 in Bristol, and 3 in Birkenhead. The deaths attributed to measles, which had been 59 and 54 in the two previous weeks, further declined last week to 34, and was the lowest number recorded in any week of the current year; 6 deaths occurred in London, 6 in Bolton, 5 in Manchester, and 3 in Nottingham. The deaths from enteric fever, which had been 11 and 18 in the two preceding weeks, further rose to 21 last week, and included 3 in Wigan, 2 in Stoke-on-Trent, and 2 in Hull. The 8 fatal cases of scarlet fever was the lowest number recorded in any week of the current year. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had been 1442 1388, and 1352 in the three preceding weeks, had further declined to 1327 on Saturday last; 168 new cases of this disease were admitted to these hospitals during the week, against 159, 149, and 132 in the three previous weeks. These hospitals also contained at the end of last week 723 cases of diphtheria, 231 of whooping-cough, 161 of measles, and 57 of enteric fever, but not one of small-pox. The 1529 deaths from all causes in London last week showed a decrease of 116 from the number returned in the previous week, and included 73 which were referred to diseases of the respiratory system, against 97 and 85 in the two previous weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 184 and 152 in the two preceding weeks, further declined to 147 last week, and 322 inquest cases were registered. The causes of 35, or 0·5 per cent., of the deaths registered in the 77 towns during the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified last week in Sheffield, Bristol, Bradford, Hull, Newcastle-upon-Tyne, Nottingham, and Portsmouth, and in 48 other smaller towns. The 35 uncertified causes of death last week included 5 in Liverpool, 3 in Birmingham, 3 in Gateshead, and 2 each in Reading, West Bromwich, Coventry, Burnley, and South Shields.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 752 births and 564 deaths were registered during the week ending Sept. 2nd. The annual rate of mortality in these towns, which had been equal to 14·2 and 15·5 in the two preceding weeks, further rose last week to 17·2 per 1000. During the first nine weeks of the current quarter the annual death-rate in these Scotch towns averaged 14·8 per 1000, and was 1·5 below the mean rate during the same period in the 77 large English towns. The annual death-rates in the Scotch towns last week ranged from 13·4 and 15·4 in Aberdeen and Edinburgh, to 20·1 in Leith and 20·3 in Perth. The 564 deaths from all causes in the eight towns last week exceeded by 55 the number returned in the previous week, and included 134 which were referred to the principal epidemic diseases, against 99 and 114 in the two preceding weeks; of these 134 deaths, 113 resulted from diarrhœa, 10 from whooping-cough, 5 from diphtheria, 4 from measles, 1 from scarlet fever, and 1 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 4·1 per 1000, the mean death-rate last week from the same diseases in the 77 English towns having been 8·4. The deaths attributed to diarrhœa, which had increased from 33 to 88 in the four preceding weeks, further rose last week to 113, and included 96 of infants under two years of age; 72 deaths occurred in Glasgow, 11 in Dundee, 8 in Edinburgh, and 6

each in Paisley, Greenock, and Perth. The 10 fatal cases of whooping-cough were 2 less than the number in the previous week, and included 4 in Edinburgh, 3 in Glasgow, and 3 in Aberdeen. The 5 deaths from diphtheria were equal to the number in the previous week, and included 2 in Leith and 2 in Perth. Two of the 4 deaths referred to measles, and the fatal case of enteric fever, were registered in Glasgow. The fatal case of scarlet fever was recorded in Edinburgh. The deaths referred to diseases of the respiratory system in the eight towns, which had been 29 and 41 in the two preceding weeks, declined to 24 last week, and were 23 below the number in the corresponding week of last year. Of the 564 deaths from all causes in the eight towns last week 159, or 28 per cent., were recorded in public institutions, and 14 deaths were attributed to different forms of violence. The causes of 10, or 1·8 per cent., of the deaths in the eight towns last week were not certified; in the 77 English towns the proportion of uncertified causes of death during the week did not exceed 0·5 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 609 births and 462 deaths were registered during the week ending Sept. 2nd. The annual rate of mortality in these towns, which had been 17·1, 19·4, and 19·3 in the three preceding weeks, rose again to 21·0 per 1000 in the week under notice. During the first nine weeks of the current quarter the annual death-rate in these towns averaged 17·5, whilst the mean rate during the same period did not exceed 16·3 per 1000 in the 77 English towns, or 14·8 in the eight Scotch towns. The annual death-rate last week was equal to 25·8 in Dublin (against 17·6 in London), 18·6 in Belfast, 24·5 in Cork, 12·8 in Londonderry, 17·7 in Limerick, and 9·5 in Waterford; whilst in the 16 smallest of these towns the mean annual death-rate did not exceed 17·8 per 1000. The 462 deaths from all causes in the 22 Irish towns exceeded the number in the previous week by 36, and included 153 which were referred to the principal epidemic diseases, against 114 and 133 in the two preceding weeks; of these 153 deaths, 141 resulted from diarrhœal diseases, 7 from whooping-cough, 2 from enteric fever, 2 from measles, and 1 from diphtheria, but not one from scarlet fever or from small-pox. These 153 deaths from the principal epidemic diseases were equal to an annual death-rate of 6·9 per 1000. The mean rate from the same diseases in the 77 English towns was equal to 8·4 per 1000, while in the eight Scotch towns it did not exceed 4·1. The deaths attributed to diarrhœal diseases, which had been 104 and 112 in the two preceding weeks, further rose to 141 last week, and included 126 of infants under two years of age. Fifty-eight deaths occurred in Dublin, 49 in Belfast, 6 in Cork, and 6 in Newtownards. The deaths referred to whooping-cough, which had been 3 and 8 in the two preceding weeks, were 7 last week, and were all registered in Dublin. The 2 fatal cases of enteric fever occurred in Dublin and Belfast, those of measles in Dublin and Newtownards, and that of diphtheria in Dublin. The deaths referred to diseases of the respiratory system, which had been 39 and 30 in the two preceding weeks, were 31 last week. Of the 462 deaths from all causes in the 22 town districts last week 109, or 24 per cent, occurred in public institutions, and 8 deaths were attributed to different forms of violence. The causes of 15, or 3·2 per cent., of the deaths in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes of deaths during the week under notice did not exceed 0·5 per cent. in the 77 large English towns, and was equal to 1·8 per cent. in the eight Scotch towns.

SUNDERLAND AND NORTH DURHAM EYE INFIRMARY.—The extension of the Sunderland and North Durham Eye Infirmary, undertaken in memory of Mr. Thomas Frederick Hopgood, surgeon to the institution, who died in May, 1909, was opened by the Mayor of Sunderland on August 26th. After the ceremony the mayor, on behalf of the vice-president and the general committee, presented a silver rose bowl and some other articles to Captain George Butchart, chairman of the house committee, for his supervision of the work. The cost of the extension has been over £700.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeons: J. H. Pead to the *Cumberland*, on recommissioning; J. E. H. Phillips to the *Superb*; and G. A. Waters to the *Excellent*. Staff-Surgeons: H. Hunt to the *Endymion*; J. G. Peebles to the *Dido*, on commissioning; and R. W. B. Hall to the *Sirius*, for voyage out and home. Surgeons: R. F. MacMahon to the *Pembroke*, additional, for disposal; L. L. Greig to the *Cumberland*, on recommissioning; and G. Moir to the *Pembroke*, additional, for disposal.

ROYAL ARMY MEDICAL CORPS.

Major James C. Morgan to be Lieutenant-Colonel, vice S. R. Wills, retired (dated August 30th, 1911).

The under-mentioned officers are seconded for service with the Egyptian Army (dated August 17th, 1911): Captain Robert B. Black and Lieutenant Harry S. Ranken.

Captain E. S. Worthington, M.V.O., now serving in London, has been appointed medical officer on the staff of the Duke of Connaught when the latter proceeds to Canada. Captain R. J. B. Buchanan has been appointed to the Alexandra Hospital, Cosham, as clinical pathologist. Captain D. Coutts has been granted general leave to Oct. 15th next.

Colonel M. W. Kerin, C.B., principal medical officer of the Seventh (Meerut) Division, has taken up duty at Mussooree. Brevet-Lieutenant-Colonel O. R. A. Julian, C.M.G., lately commanding the Military Hospital, and civil surgeon at Kasauli, has taken up duty in the Dublin District on completion of his tour of service in India. Major T. McCulloch, from Mandalay, has been appointed to the medical charge of the Military Hospital at Calcutta. Major E. C. Anderson, from Kuldana, has been transferred to the Military Hospital at Rawal Pindi for duty. Major P. H. Collingwood, from Devonport, has been appointed to the medical charge of troops at Exeter. Captain W. F. H. Vaughan has been transferred from Cosham to Parkhurst. Captain G. E. Cathcart, from Chester Military Hospital, has been placed in medical charge of Trawsfynydd Camp. Captain R. H. L. Cordner, on return from service in India, has been appointed for duty in the Southern Command. Captain D. P. Johnstone, from Liverpool, has been detailed for duty at Ross Camp. Captain A. A. Meaden, on completion of a tour of service at Nasirabad, India, has been posted to the Military Hospital at Fermoy. Captain G. Ormerod has been transferred from Belfast to Londonderry. Captain C. P. O'Brien-Butler, from Purandhar, has taken up duty at Belgaum.

INDIAN MEDICAL SERVICE.

Surgeon-General P. H. Benson has retired. Colonel D. ffrench-Mullen, who will shortly vacate the appointment of Deputy Principal Medical Officer at Indian Army headquarters, has been appointed Principal Medical Officer, Sirhind and Jullundur Brigades. Major L. F. Smith has been appointed to the charge of the Brigade Laboratory at Nowshera. Captain C. H. Cross has been posted to the medical charge of the 15th Ludhiana Sikhs.

His Excellency the Governor of Bombay in Council has appointed Lieutenant-Colonel Ashton Street to be Senior Surgeon and Professor of Clinical and Operative Surgery at the Grant Medical College, Bombay, in succession to Lieutenant-Colonel W. H. Quicke, who has retired. Major J. G. Murray has been appointed Civil Surgeon at Berhampur, Bengal. Major J. M. Woolley has been appointed Senior Medical Officer at Fort Blair. Major R. F. Standage, Bombay, has had an extension of leave granted by the Secretary of State for India. Major J. W. Watson has been appointed Agency Surgeon at Alwar. On return from combined leave of absence home from India Major C. H. Bensley has been appointed to officiate as Superintendent of the Central Jail at Nagpur. Major F. O. N. Mell has been appointed to officiate as Inspector-General of Prisons in the Central Provinces during the absence on leave of Lieutenant-Colonel W. B. Lane. The services of Captain R. T. Wells have been placed temporarily at the disposal of the Government of the Punjab by the Home Department. Captain A. S. M. Peebles has been appointed to officiate as Superintendent of the Central Lunatic Asylum at Berhampur. Captain E. P. Mackie has been posted by the Home Department of the Government of

India for duty in the United Provinces. Captain H. M. Brown has been selected to officiate as Deputy Sanitary Commissioner of the Bengal and Orissa Circle. Captain C. C. Murison has been appointed to officiate as Civil Surgeon and Superintendent of the Lunatic Asylum at Hyderabad.

TERRITORIAL FORCE.

Yeomanry.

Nottinghamshire (South Nottinghamshire Hussars) Yeomanry: Surgeon-Lieutenant William T. Rowe to be Surgeon-Captain (dated July 27th, 1911).

Royal Army Medical Corps.

1st London (City of London) Field Ambulance, Royal Army Medical Corps: The undermentioned officers resign their commissions: Captain Charles A. Lees and Captain Percival G. A. Bott (dated Sept. 6th, 1911). Hans Conrad Swertz to be Lieutenant (dated Sept. 6th, 1911).

5th Southern General Hospital, Royal Army Medical Corps: Major John R. S. Robertson to be Lieutenant-Colonel (dated May 1st, 1911). Captain Thomas A. M. Forde to be Major (dated May 1st, 1911).

For Attachment to Units other than Medical Units.—John William Bell to be Lieutenant (dated July 18th, 1911).

Attached to Units other than Medical Units.—Captain Robert H. Gilbert-Bruce resigns his commission (dated Sept. 6th, 1911).

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Lieutenant Alexander C. McKillop resigns his commission (dated Sept. 6th, 1911).

The undermentioned Lieutenants are confirmed in their rank: Arthur H. Habgood, Alexander C. Court, Clarence E. Greeson, John P. Charnock, William Crymble, Laurence M. Routh, Sydney J. Higgins, Robert H. Nolan, Leonard W. O. Taylor, Reginald Fisher, John H. C. Grene, and Harold F. Vellacott.

The undermentioned to be Lieutenants (on probation): Cadet Lance-Corporal Charles Hope Carlton, from the University of Oxford Contingent, Officers' Training Corps (dated July 31st, 1911). Cadet Corporal D'Arcy Power, from the University of London Contingent, Officers' Training Corps (dated August 7th, 1911).

VACCINATION IN THE ARMY.

In the House of Commons recently the Under Secretary of State for War, replying to Mr. John Ward, M.P., said that with the exception of those bearing distinct marks of small-pox all army recruits were vaccinated, unless in the case of a recruit joining from the Special Reserve the operation was certified to have been successfully performed during his service in this force. Once a year, in March, medical officers were required to satisfy themselves that every man, woman, and child under their charge was sufficiently protected by vaccination. There had been only one admission to hospital for small-pox amongst the army at home for the last five years, and that was in the case of a woman. It was well known that the period of immunity after vaccination or revaccination varied, and those individuals whose period of immunity commenced to decline earlier than usual were liable to fall victims to the disease, as was the case with the woman mentioned. Accordingly, owing to the chance of there being individuals present in the barracks whose period of immunity was for various reasons declining or becoming evanescent, it was considered necessary that all persons living in or associated with barracks should be adequately protected against small-pox.

THE UNITED STATES NAVAL MEDICAL BULLETIN.

This quarterly bulletin is published under the authority of the Surgeon-General of the United States Navy "for the timely distribution of such information as is deemed of value to the medical officers and the hospital corps in the performance of their duties." The issue of July, 1911, contains a very useful compilation by Surgeon E. M. Shipp, U.S.N., of our present knowledge of tropical diseases in their relation to the eye, in which he divides them into five classes—viz., those due respectively to bacteria, moulds, protozoa, helminths, and toxins and other causes. He discusses each member of these five groups separately. A report, a sequel of a previous communication, from the United States Naval Hospital, Norfolk Va., by Passed Assistant Surgeons G. B. Trible and H. A. Garrison, U.S.N., records and discusses eight cases in which the conclusion is arrived at that the treatment of syphilis with salvarsan is of particular advantage in the service, either alone or in combination with mercurials. In the primary and secondary stages (the most common ones in the service) the rapidity of return to duty on treatment with salvarsan is remarkable. The following is recommended as an ideal treatment: "In primary lesions, thorough excision as soon as diagnosed, two intravenous administrations of salvarsan at intervals of ten days, followed by an active mercurial treatment by injection or inunction for a period of three months. In the secondary and tertiary stages this treatment should be combined with mercury and potassium iodide." Passed Assistant Surgeon H. Butts, U.S.N., discusses the mental examination of 50 recruits who became insane soon after enlistment, and urges more time for the inquiry into the past history of candidates, so as to exclude alcoholics, drug fiends, sexual perverts, and mental defectives. Oblique inguinal hernia (almost the only type found in the United States navy) is discussed with reference to diagnosis and treatment by Passed Assistant Surgeon B. F. Jenness, U.S.N. From the United States Naval Medical School laboratories comes a report of special interest to naval surgeons, on the Davainea Madagascariensis in the Philippine Islands, by Passed Assistant Surgeon P. E. Garrison, U.S.N. Passed Assistant Surgeon M. E. Higgins, U.S.N., arrives at the conclusion that a negative reaction in Noguchi's complement fixation test "may mean either that the individual has never had syphilis, that he has had syphilis and been cured, or that owing to treatment the action has disappeared," while "weakly positive and faintly positive reactions without strong clinical evidence of lues are not to be accepted as bespeaking a positive diagnosis." Among many other interesting communications Passed Assistant Surgeon W. A. Angnin, U.S.N., describes a somewhat complicated but apparently effectual method of treating fracture of the lower jaw by wiring.

Correspondence.

"Audi alteram partem."

SEA-WATER: ARE ITS CURATIVE EFFECTS DUE TO RADIO-ACTIVITY?

To the Editor of THE LANCET.

SIR,—In THE LANCET of August 5th, p. 361, Dr. I. C. Maclean and Mr. L. de C. Harston record a case of toxæmia, presumably of intestinal origin, which cleared up in a remarkable manner under injections of sea-water. They state that Dr. H. D. Rolleston, who saw the case in consultation, regards the good effect as possibly due to the large amount of sodium chloride introduced into the tissues. Other writers have also held this view. Leary, for example, states that the action of isotonic sea-water solution is practically neither more nor less than that of physiological saline.[1] If this be indeed the case, then the careful process of collection and preparation becomes simply an elaborate farce.

But is the action, osmotic or chemical, of sodium chloride the complete explanation of the therapeutics of sea-water? Discussing, some months ago, the treatment of mucous colitis,[2] I suggested that radio-activity may play a part in the effects produced. Since then further investigations have strengthened this belief, and it may be of interest to state briefly the facts on which I base my conclusion.

In the course of my practice I receive many cases of lupus and of indolent leg ulcer for treatment by X rays. Amongst other work obstinate cases from the Auckland Union Infirmary come under my care, whereas the simple examples are treated by other methods. Through the courtesy of Mr. Mark A. Wardle I was enabled to watch the progress of some of these latter, *pari passu* with that of my own cases under X rays. The clinical course and results, allowing for difference of severity, were so strikingly similar that I was led to the conclusion that the same agent—radio-activity—might be at work. Beyond a casual reading of Robert

[1] Leary: Boston Medical and Surgical Journal, August 18th, 1910.
[2] Practitioner, May, 1911.

Simon's article[3] I had not till this time taken much interest in the therapeutics of sea-water; but I have since consulted all the literature available to me on sea-water injection, sea voyages, and radium-water therapy.[4]

I find that the two agents agree in the following properties: 1. General tonic and stimulant action; this is produced with great rapidity and thus differs from the slow effects obtained by medicinal tonics. 2. The production of diuresis, and alteration in the output of urea and uric acid. 3. Continued administration results in gain in body weight, with accompanying speeding up of metabolism, increase of appetite, and increased output of CO_2. 4. Therapeutically, marked benefit is produced in neurasthenia, intestinal auto-intoxication, certain skin diseases, chronic joint troubles, early tuberculosis, and some cases of albuminuria. 5. Radium-water, whether artificially prepared or obtained from natural springs, owes its activity to dissolved "emanation," which is a gas. This gas which, under natural conditions, is being constantly renewed, loses its activity fairly rapidly, declining to half value in less than four days. It may be removed from the water by boiling for some time. *The therapeutic value of sea-water is destroyed by heat; nor is it of any use after it has been kept three weeks.* Of the truth of these statements I have had ample confirmation in my own practice.

A pertinent question is, Does the physicist recognise the presence of radio-activity in freshly gathered sea-water? At the recent meeting of the British Medical Association in Birmingham, Professor Farr (chair of Physics, Christchurch, N.Z.) gave an address on the Effects of Radio-active Water on Fish.[5] In connexion with this subject, I mentioned to him my views on sea-water treatment, and he informed me that ocean water *is* to some small extent radio-active, and that this activity is mostly due to dissolved emanation.

I submit, therefore, that in view of the fact that sea-water is radio-active, and that its physiological and therapeutic effects so strikingly resemble those of radium water, there is very good reason to believe that its curative powers are, at any rate in great part, due to the emanation which it contains. In radio-activity we have an agent capable of producing all the diverse and powerful effects which are claimed for sea-water treatment—effects which range from the cure of lupus to the banishment of an obscure toxæmia, such as that described by Dr. Maclean and Mr. Harston. So far as I am aware, no salt or combination of salts could accomplish such results.

If my theory be correct, its practical importance is obvious. Ocean water is kept constantly radio-active, probably as a result of submarine volcanic processes. Once removed, however, it rapidly loses its virtue. Hence, it is only freshly collected water which is of value; to get the best results we should use it within a week. Those who do not observe this rule cannot be said to give the method a fair trial; they may well find sea-water of no more value than salt solution.

I am, Sir, yours faithfully,

FRANCIS HERNAMAN-JOHNSON, M.D., Ch.B. Aberd., R.N. (retired).,

Bishop Auckland, August 15th, 1911.

A QUESTION IN EUGENICS.

To the Editor of THE LANCET.

SIR,—Many of your readers have carefully followed the discussion of this question in your pages. We have, I trust, derived benefit, but the actual enlightenment is less than many of us hoped for.

The original question was specific and definite. Is a father, acting in the interests of an epileptic son under age, entitled to procure an operation which will prevent that son from becoming a father? It is a question that will, before long, demand an answer. But it has not so far received an answer. The stream of heart-felt eloquence at high pressure directed against your columns seems, indeed, to have washed the question away. Certainly it is satisfactory to know that there are members of the profession who wear their hearts upon their sleeve, and still more satisfactory to be assured that the emotions contained in those hearts are of so lofty a character. But we never doubted it. These emotions are beside the mark. The question is one that can only be discussed profitably in the dry light of intelligence. Moreover, it demands precise knowledge.

It is surprising to find that several of your correspondents imagine that a question of this kind can be dismissed by talking about a supposed abstract conflict between the "individual" and the "race." A concrete question demands a concrete answer. In this case the possible father is an "individual"; the possible children would also be "individuals." The children of this father are likely to involve a special burden of anxiety and expense, while his own condition will render him unfit to cope with that burden. Under such conditions the children are likely to be a misery to themselves and to others. There is no conflict here between the "individual" (the possible father) and the "race" (the possible children). Their interests are identical. Evidently it is dangerous to plunge into academic disquisitions of a pseudo-metaphysical character when asked to reply to a simple concrete question.

There is another point on which some of us feel that we have been led astray. No doubt there is a wide range of variation in what the phrenologists call philoprogenitiveness. But in some of your correspondents this bump must be developed to a really alarming extent. It is good to have children, so long as one is reasonably assured that those children will be well-born, and that one is able to provide for them. But it is another matter to have children at all costs. We must not allow our philoprogenitive impulses to grow so hysterical that we become unable to see that many people remain happy and lead useful lives without children, and even with no prospect of children. I have elsewhere recorded the case of a medical man who, having as many children as he desires and wishing to avoid the unpleasant routine of preventive methods, has had vasectomy performed with results that are highly satisfactory both to himself and his wife. Now, many will consider that in such a case the operation was not called for. But supposing the subject had been a man of profoundly neuropathic constitution, there ought surely to be little difference of opinion, even though vasectomy had been performed at the outset of sexual life. In many cases, it is probable, sterilisation and freedom will prove the only proper alternative to isolation without sterilisation. "Life under such conditions is not worth living," exclaims one of your correspondents; he would rather retire to a colony for degenerates. Very well. *Chacun à son goût.*

It is not easy to feel enthusiasm about sterilisation, any more than about any other operation for the relief of suffering humanity; it would be better to avoid the need for it, and its scope must always be limited. It is surprising, therefore, to find that one of your correspondents has so much faith in the enormous effects of asexualisation that he fears lest, by abolishing human suffering, it will remove the need for moral helpfulness. One may note in passing that the "moralist" who would perpetuate human misery in order to cultivate his own moral helpfulness is a "moralist" who must be severely isolated in inverted commas. (Let me add that I am sure he does himself an injustice and is the victim of his own controversial ingenuity.) But this fear is uncalled for. Everyone who is acquainted with the actual conditions of things to-day knows that, far from being threatened by the disappearance of the need for moral helplessness, we are being overwhelmed by the burdens involved by our moral helpfulness. The favour with which sterilisation is now viewed is largely due to the hope that, if wisely and discriminately carried out, it may help us to cope with those burdens.

It is not, I believe, quite correct that sterilisation has been "legalised" in Switzerland. The reference is probably to the operations performed at the Cantonal Asylum at Wil. (The portion of the sixteenth annual report of the asylum dealing with the matter is reproduced in the *Psychiatrisch-Neurologische Wochenschrift*, No. 2, 1909.) In these cases the operation (actual castration), carried out on two men and two women, was performed not only by agreement with the relatives and the local authorities, but with the eager consent of the patients themselves, who were thus enabled to return

[3] Robert Simon: "Injections of Sea Water," Medical Annual, 1910.
[4] Amongst writings consulted were: "Sea Air and Sea Baths," Quain's Dictionary of Medicine; "Treatment of Rheumatism by Radium," Professor His, Brit. Med. Jour., Feb. 4th, 1911; Papers on Radium Emanation by Armstrong and Saubermann, British Medical Association, Birmingham, July, 1911.
[5] See THE LANCET, August 12th, 1911, p. 446.

to freedom and to work. No compulsion being exercised, no legislation was necessary. This is as it should be. There are very serious objections to compulsory sterilisation.

This discussion has made it clear not only that it is desirable (let me repeat) to cultivate the dry light of intelligence, but also that an extended knowledge of the elementary facts of sexual physiology and psychology would be highly advantageous. Here we see a medical man who apparently confuses vasectomy with castration; there another who believes that vasectomy is fairly comparable with cryptorchidism; again a third who, one suspects, imagines that sterilisation involves impotence. It is also evident that some among us, however young in years, are still living in the past, not realising what men and women are thinking and doing to-day, nor the new ideals which are inspiring them.

In these matters of eugenics the growth of both general and professional opinion (even since the Royal Commission on the Feeble-minded issued its report three years ago) is most remarkable to those who watch the development of opinion. It is idle to ignore it.

I am, Sir, yours faithfully,

West Drayton, Sept. 4th, 1911. H. HAVELOCK ELLIS.

NATIVE NURSES IN SOUTH AFRICA.

To the Editor of THE LANCET.

SIR,—In a South African newspaper, the *East London Daily Dispatch*, a few weeks ago there appeared an extract from a letter said to have been published in THE LANCET. I have not been able to trace the letter in your columns, but as I presume it must have appeared I should be glad to be allowed a little space to reply to it. The writer says that the native probationers in training in this hospital "are stated to compare very unfavourably with European probationers," and the inference from his letter is that they are so unsatisfactory that no hospital will employ them. The fact, however, is that with one exception the colonial hospital authorities have never been willing to give these nurses a trial. That one hospital has employed two and is now wanting another.

It is quite true that a native girl has a longer hill to climb than a European girl before she can become a good nurse. Her home training usually is not so good. Studying in English is also a difficulty for probationers whose home language is not English. But some of our probationers have become very fair nurses, and in the work of nursing natives they, of course, have a great advantage over European nurses, who often cannot speak the patient's language. We are hoping to find employment for our native nurses under Lady Gladstone's District Nursing Scheme in memory of King Edward. In this scheme special provision is being made for this purpose, and I hope none of your South African readers who may be in a position to forward the native section of the scheme will be deterred from doing so by the letter to which I have referred. One of our nurses has for several years been engaged in district nursing and her work has been favourably commented upon both by her employers (a colliery company) and by the public health authorities.—I am, Sir, yours faithfully,

NEIL MACVICAR, M.D.,
Medical Superintendent, Victoria Hospital, Lovedale Mission, South Africa.

*** The subject was referred to in our columns on July 8th, but the words quoted were not used. We have pleasure in publishing Dr. Macvicar's letter.—ED. L.

TATTOOING *v.* VACCINATION.

To the Editor of THE LANCET.

SIR,—Curiously enough, I was just on the point of writing to you on the subject of tattooing in connexion with vaccination, when I read the letter of your correspondent, "E. A. A.," on the subject in THE LANCET of August 26th, p. 664. My object was to tell you that I had recently been informed by a time expired non-commissioned officer, late of the Indian army, that at several stations where he had served medical officers repeatedly told the men that they need not be vaccinated if they were tattooed, and he himself being well tattooed had been exempted from compulsory vaccination.

The attention you are drawing to the subject ought to test the truth of such stories (personally I have absolute confidence in the truth of my informant) and bring the matter to the attention of those responsible. My informant added that men who agreed to allow themselves to be tattooed were granted 13 or 18 days (I forget which) relief from duty for the express purpose!

I am, Sir, yours faithfully,

J. Y. W. MACALISTER.

Royal Society of Medicine, Cavendish-square, W., August 31st, 1911.

SPONTANEOUS COMBUSTION OF METHYLATED SPIRIT.

To the Editor of THE LANCET.

SIR,—With reference to the letter of Dr. John J. Robertson, in THE LANCET of August 12th, p. 475, may I record a somewhat similar incident that has occurred here? On August 1st a lady rose to make a cup of tea at 6.15 A.M. The spirit lamp (with wick) was standing on the floor near the grate. Directly she took the cover off it flared up, and she was burned rather severely about her face and ear. The lamp had not been used since the morning before. A box of matches was on the mantel-piece, but had not been touched. The window was open top and bottom, but the sunlight was streaming through the glass on to the lamp. The patient told me that a similar accident happened ten years ago to her cousin. The lamp in that case was standing in a bay-window, and its ignition was attributed to the sunlight.

I am, Sir, yours faithfully,

W. J. ERNELY SUMPTER, M.D., &c.

Sheringham, August 29th, 1911.

A DERMOID CYST OF THE TESTICLE.

To the Editor of THE LANCET.

SIR,—Dr. Ernest E. Hughes's statement, in recording a case with the above title in last week's number of THE LANCET, that "a left-sided testicular dermoid has yet to be recorded," presumably means in English. Of the cases collected by Wilms and published in 1896, the side affected was stated in ten cases and was the left in four of them.

I am, Sir, yours faithfully,

F. J. F. BARRINGTON.

Medical School, University College Hospital, W.C., Sept. 4th, 1911.

A DISCOVERY IN REGARD TO THE FUNCTIONS OF THE KIDNEY: A CORRECTION.

To the Editor of THE LANCET.

SIR,—I trust you will allow me to correct an error in the Croonian lecture delivered before the Royal Society on June 15th by Professor T. G. Brodie, which I have only just noticed.

The "new conception of the glomerulus" of the kidney offered by Professor Brodie was discovered over 30 years ago by my brother, Dr. A. W. Smyth of New Orleans (better known in connexion with the first successful operation for subclavian aneurysm by tying the vertebral artery for the first time, and mentioned at length in Erichsen's Surgery and by Sir Frederick Treves and others). The discovery in regard to the function of the kidney was published in a pamphlet at the time and appears in the "American Encyclopædia of Biography" and elsewhere.

A. W. Smyth showed that there was no communication between the Malpighian corpuscle and the uriniferous tubules, as taught by Bowman; that there was no filtration; that the water reached the tubules by their own epithelial cells; that the glomerule was a vascular hydraulic ram acting with such force, as in one instance, to push a calculus half an inch in diameter down a ureter.

I am, Sir, yours faithfully,

WM. WOODS SMYTH,

Maidstone, Sept. 1st, 1911. Fell. Med. Soc. Lond., &c.

ACUTE MANIA A COMPLICATION OF MEASLES.

To the Editor of THE LANCET.

SIR,—The few text-books which make any mention of such a complication of measles as acute mania only allude to it in the briefest possible manner, so that the following account of a case may be of some interest.

The patient was a well-built, well-nourished, strong, active woman aged 22 years. No history of disease of the nervous system or of mental disorder could be discovered amongst her relations past or present There was nothing of interest in the past history of the patient, who was one of a family of six. The attack of measles began in the usual way with nasal catarrh. Menstruation began two days previously and lasted four days and was normal in every way. Koplik's spots were seen quite distinctly on the second day, when the morning temperature was 100·2° F. The rash appeared on the evening of the third day, and when fully developed was very characteristic. It was first noticed behind the ears, and was not well out on the face until the evening of the fourth day. It had disappeared on the eighth day. The morning temperature was 99 8° on the third day, 102·8° on the fourth, 101·6° on the fifth, 99·2° on the sixth, and 98·4° on the seventh and eighth. There was never any earache, vomiting, diarrhœa, headache, or sore-throat. There was never any evidence of lung trouble beyond the bronchial catarrh usual in measles, which was not at all severe in this case. There was a good deal of injection of the conjunctivæ on the fourth day, but this soon abated. The eyes were bathed every four hours with boric lotion. At the end of a week the patient seemed to be on the high road to a rapid and complete recovery. She was hungry and cheerful. She had slept well for two nights, and showed no signs of the illness beyond a natural feeling of weakness.

In the light of after events there is an inclination to think that the patient was rather excited on the morning of the eighth day, but had she recovered from the measles in the ordinary way it is probable that no one would ever have recollected the excitement. About 9 P.M. on the eighth day she quite suddenly asked whether she would be well enough to go to a dinner party with some friends that day fortnight. The question aroused some interest because the day was Sunday and the friends were not people who were at all likely to give a dinner party on the Sabbath, and also no mention of any dinner party at their house had been made by anybody. However, nothing more unusual happened until about midnight, when the patient, who had been lying quiet in bed, though not asleep, for about two hours, suddenly sprang out of bed and literally bundled an old servant, who was dozing in a chair by the fire, neck and crop out of the room and downstairs before she had time to realise what was happening. At 12 30 A M the patient was sitting up in bed talking incessantly and incoherently. At intervals she made frantic struggles to get to the fire, and it was with considerable difficulty that two people were able to keep her in bed. Her face was flushed, her eyes bright and sparkling, her temperature 99·2°, pulse 96, and respirations 24. There was nothing abnormal to be detected in the thorax or abdomen. The pupils reacted well to light; the knee-jerks were normal; urine had been passed about 10 P.M.; the bowels had been open after an aperient the previous morning; the tongue was tremulous and coated with white fur. The patient was labouring under a delusion that all her relatives were devils, and she consigned them all, individually and collectively, to the nether regions in extremely vigorous language. She was given 40 grains of bromide of potassium and in about an hour she became much quieter so long as her relatives did not approach her. Any attempt on the part of any of them to do this irritated and excited her extraordinarily. From 2 A.M. to 5 A.M. she remained fairly quiet though not asleep, but about 5 A.M. she became as excited again as she was at midnight. After another dose of bromide there was comparative peace until about 9 A.M., when another phase of excitement began. There was neither sugar nor albumin in the urine. There was nothing abnormal to be seen with the ophthalmoscope. There was no nystagmus, no strabismus, no deafness, no tremor of the hands, and no anæsthesia or hyperæsthesia of the skin could be discovered. Forty grains of bromide of potassium were given every four hours, and during the day the patient was not violent, though at times she became very excited, and all day she was quite irrational. She took sloppy food well. The temperature was 99·4° in the morning and 100·8° in the evening. Thirty grains of chloralamide were given about 10 P.M., but the patient never slept at all during the night. Most of the time she talked incessantly, and two or three times was quite violent. On the tenth day a dose of 30 grains of bromide of potassium with 15 grains of chloral hydrate was given every four hours. The temperature was 99·8° in the morning and 100·6° in the evening. The face was much less flushed and was almost expressionless instead of being bright and excited. A daily dose of an aperient had to be given to overcome the constipation. The patient's main delusion now was that the doctor was Jesus Christ.

On the eleventh day the patient was a good deal worried by hallucinations of sight and hearing; and she imagined that she was the chief of sinners. She was quieter but very morose. Her memory seemed completely in abeyance. The morning temperature was 99·2° and the evening 99·8°. The pulse was 84. On the twelfth day the chief mental trouble was the appearance of pronounced erotic symptoms. When the doctor tried to put his stethoscope on her chest she flung her arms round his neck and tried to drag him into the bed. A Widal reaction proved negative. Sloppy food was taken well. The temperature was 99·0° in the morning and 99·6° in the evening. The chloral and bromide were still continued, but the patient had only had about four hours' sleep during the last four days. The erotic symptoms persisted for four days and then gradually subsided, and at the same time a gradual general improvement began. More sleep was obtained, the restlessness diminished, and the delusions disappeared.

At the end of three weeks the chloral and bromide were given up and occasional doses of chloralamide were given to ensure a good night's rest. The patient was free from delusions but was inclined to be melancholic. She took no interest in what went on around her, and her intellect seemed to have relapsed into the condition of that of a child of four. She answered questions childishly and was quite pleased when a book of nursery stories was read aloud. The presence of her relatives no longer worried her, and so they were readmitted to her room which they had not entered for ten days. At the end of a month there was a decided improvement, though there were occasional fits of depression, and a dose of chloralamide had to be given occasionally.

The patient began to get up soon after this, and though rather weak physically soon picked up strength. She went away to the seaside at the end of six weeks and made steady progress. She became more cheerful and much less childish. She amused herself with sketching and simple games, and took a good deal of walking exercise, but was incapable of any sustained mental effort for nearly six months, and her movements were performed in rather a jerky manner. No hypnotic was given after two months. Nine months after the onset of the measles the patient was quite herself again in every way and no traces of the illness remained.

I am, Sir, yours faithfully,

Sept. 2nd, 1911. A PHYSICIAN.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

A Nursing Home for Edinburgh.

A NEW nursing home for Edinburgh, Leith, and country districts for patients of limited means, which is to be established in Chalmers-street, Edinburgh, is the outcome of the successful experience of the working of the small nursing home of 12 beds in Rutland-square, in the development of which Dr. D. Chalmers Watson took an active part. For the past few years this institution has shown a working profit of £100, and all the original capital outlay has been paid up. The gradual growth of confidence, following on the characteristic Scotch caution with which the Rutland-square home was at first regarded by the Edinburgh medical men, led Dr. Watson to suggest this larger scheme, which has developed under the auspices of the Edinburgh branch of the British Medical Association and the Leith

Medical Practitioners' Association to the region of practicability. A block of three large houses in Chalmers-street has been secured, which will be converted into a well-equipped nursing home, with all modern facilities for the diagnosis and treatment of disease as soon as the necessary sum of £10,000 is in hand. The committee first appealed for donations on March 29th. By April 12th the sum of £3600 had been secured; by May 6th, £5600; by June 16th, £7300; by July 8th, £8600; and now only a balance of £800 is still required. Donations only are asked for; subscriptions will not be required, as it is confidently expected that as soon as the home is open it will become self-supporting. The aims of the home are best described in the following words of Lord Balfour of Burleigh:—"The very poor have a chance of getting assistance in our best hospitals. Those in the higher grades of the social scale can provide it for themselves, but between these two extremes there are many who, while they can, and ought, and are indeed willing to pay something, are quite unable to meet the whole expense of operations and a long residence in nursing homes." The proposed nursing home will contain 50 beds—viz., 18 at the rate of 1 guinea a week, 18 at 2 guineas, and 14 (in single rooms) at 3 guineas. Admissions at the 1 guinea rate must all be made on the recommendation of the medical adviser as being cases suitable for admission at this rate. Both sexes will be received, and for either medical or surgical ailments, and they will be attended by any qualified practitioner at their own selection. The charges include all maintenance and nursing, the patients being responsible for the fees of their medical attendants. The scheme has received the cordial approval of the council and executive committee of the City of Edinburgh Charity Organisation Society. Lord Dunedin is the chairman of the general committee, Mr. Richard Lodge is chairman of the executive committee, while Mr. John L. Somerville, of 6, South Charlotte-street, and Dr. Watson are respectively treasurer and secretary.

Strichen Hospital: Local Government Board Inquiry.

For some considerable time past trouble has been experienced in the working of the Strichen infectious diseases hospital. The hospital, which serves a wide radius, from as far south almost as Ellon, seawards to Boddam, and north-west to Aberdour, is managed by a subcommittee of the Deer district committee of the Aberdeenshire county council. Two medical practitioners in Strichen, Dr. G. S. Trail and Dr. J. H. Stephen, some 15 months ago were appointed medical attendants at the hospital for alternate periods of a year each. According to this arrangement Dr. Trail should have been taking up duty in place of Dr. Stephen in May last. On April 29th of this year the hospital subcommittee met and resolved to ask Dr. Stephen to continue in office after Whit-Sunday next (subject to the existing condition of three months' notice), and instructed the clerk to intimate this resolution to Dr. Stephen and to Dr. Trail. This action of the subcommittee was objected to by Dr. Trail's law agent as being illegal, and has given rise to repeated acrimonious discussions in the district committee. Eventually it was decided to communicate with the Local Government Board and ask that an inspector be sent down to report on the whole working of the hospital. This was done, and the inquiry began on August 29th. The commissioners who held the inquiry were Dr. T. F. Dewar, one of the Local Government Board's medical inspectors, and Mr. Alexander McKinna, of the Public Health Department of the Board. The inquiry was held in the Victoria Hall, Maud, on August 29th and 30th, and was conducted in private. All the members of the hospital subcommittee were cited to appear as well as Dr. Trail, Dr. Stephen, Dr. J. P. Watt (medical officer of health for the county), the matron of the hospital, and others. It will probably be some considerable time before the result of the inquiry is made known.

Accident to a Medical Man.

When returning from a visit to a patient on the evening of August 31st, Dr. Andrew Fowler of Ellon, who was riding a motor cycle, met a motor whose lights he mistook for those of a couple of cyclists, with the result that he struck the splash-board and was thrown with great force from his machine. Fortunately the car was travelling slowly at the time, and on his being conveyed home it was found that his injuries were confined to severe bruises and shock.

Perthshire Fever Accommodation.

At a meeting of the Perthshire Highland district committee, held on August 26th, it was reported that the net cost of the county fever hospital for the past year was £1765, the proportion payable by the Highland district being £424. It was stated that only four patients had been sent from the district last year, while 150 patients were sent from Perth district at a cost of £580. It was explained that the contributions from the district had nothing to do with the number of patients sent, and the fact that there were so few was testimony to the health of the district.

Sept. 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Notification of Births in Dublin.

THE Notification of Births Act was adopted by the city council of Dublin last year, and came into operation on Nov. 1st, 1910. Sir Charles Cameron, in his annual report as medical officer of health, gives some information regarding its working during the first two months. Although the duty of notification is put by the Act primarily on the father of the child, it is noticeable that by far the greater proportion of births was notified by medical men and nurses. The total number of births notified was 628, of which 251 were notified by medical men, 312 by midwives and nurses, and only 53, or about 8 per cent., by parents. Inasmuch as (to quote Sir Charles Cameron), "the object of the Act is to give advice where necessary to mothers of the poorer classes on the feeding and rearing of infants," it is important to know how this duty was carried out by the sanitary authority. The figures concerning the number of visits paid by the lady sanitary inspectors, as given in the report, are self-contradictory, but we learn that 464 first visits were paid and 238 re-visits. The number of re-visits is very small and must be of little use in guiding the mothers in the rearing of the babies. If such visits are to be of use they should be regularly paid, and be maintained until the child is at least a year old. It is noticeable that in 408 of the cases visited breast-feeding was practised. The reports of the lady sanitary inspectors show that they realise the duties of their work and that they are able to fulfil those duties tactfully.

Death of Mr. J. C. Sellars.

The death occurred recently of Mr. J. C. Sellars, a medical man of Dundalk, and coroner for the county Louth. In former years he was a crack rifle shot, and was a member of teams representing Ireland in international competitions.

Bequest by Sir G. P. O'Farrell.

The will of the late Sir George Plunkett O'Farrell, Inspector in Lunacy, has been proved, his estate being valued at £20,295. In the event of his son and daughter dying without issue, half this sum is to go to the Irish Medical Association to form a "Sir George O'Farrell Fund" for the benefit of the widows and children of medical men dying destitute.

Health of Belfast.

At the monthly meeting of the city council of Belfast held on Sept. 1st the health report for the five weeks ending August 19th showed the death-rate of the city from all causes during that period to be 16·4 per 1000, as compared with 14·0 in the preceding month and 15 8 in the corresponding period of 1910. The zymotic death-rate was 4·1, as compared with 3·3 in the previous month, the increase being due almost entirely to diarrhœa, which caused 90 85 per cent. of the deaths from zymotic diseases. An unfavourable feature of the report is the increased notifications of enteric fever (of which there were 18 cases), and it is still more unsatisfactory to find that no cause can be assigned for this reappearance of the disease, and that the cases are scattered throughout the city.

Scarcity of Water.

All over the north of Ireland, in both urban and rural districts, there is a great scarcity of water, a very rare phenomenon in our part of the world. In many of the provincial towns the reservoirs are empty, and the city of Belfast since Sept. 4th has been placed on a short supply—that is, from 7 P.M. to 8 A.M. the water is cut off. It is clear the

water commissioners will be obliged to build new reservoirs in the Mourne mountains; they seemed never to have anticipated such a dry season as the present one. As an indication of the dryness of the year, it may be mentioned that in August there were only 2·54 inches of rain, while in the same month of 1910 the rainfall was 6·18 inches, the average for the past 36 years in that month being 4·33 inches. Up to the end of August the rainfall for the whole of this year was 18·55 inches, as against 31·78 for 1910. Owing to the low state of the rivers many salmon and trout have been killed by flax-water (that is, the water coming from holes in which the flax is "retted"), while, still worse, in certain places, such as River Roe, county Derry, poachers have poisoned the water.

Disease in Newtownards.

Mr. D. Jamison, medical officer of health of Newtownards, county Down, owing to the prevalence of English cholera and measles in that town has recommended the temporary closing of the schools.

Sept. 5th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A New Use for Radium.

NEW applications for radium in the relief or cure of disease, and particularly of those forms of disease hitherto lacking any efficacious treatment, are being diligently sought. Dr. Dominici and Dr. Chéron are the latest contributors in this field. These authors have claimed to have obtained considerable amelioration, and even cure, of deep extra-pulmonary tuberculous lesions, such as chronic adenopathies, costal caries (in this case in association with Dr. Barbarin), and fistula consequent on incomplete extirpation of bacillary foci, by the introduction into the tuberculous tissues of silver tubes containing radium. These observations have demonstrated to the authors the superiority of the procedure. The efficacy of radium-therapy in regard to certain tuberculous lesions that have hitherto shown themselves rebellious to medication has, they say, been demonstrated. The authors conclude from their observations, not that radium-therapy is always, and necessarily, more valuable than other modes of treatment in tuberculous lesions, but that there is sufficient encouragement to continue the study of radium-therapy, combining it with surgical methods and the use of various physical agencies, such as X rays, hot air, and diathermia, as well as hygienic, drug, and orthopædic measures.

The Legal Regulations for Distributing Serums.

France has a law regulating the preparation, distribution, and sale of therapeutic serums. According to this law, attenuated viruses, therapeutic serums, modified toxins, and analogous products, of use in the prophylaxis and treatment of contagious diseases, as well as substances of organic origin for injection, of undefined chemical constitution, for use in the treatment of either acute or chronic affections, shall not be issued, either gratuitously or for payment, without first obtaining the Government authorisation granted on the recommendation of the consultative committee of public hygiene of France and of the Academy of Medicine. The penalty is three months' imprisonment and 50 francs fine. The Court of Cassation has recently handed down a judgment which will cause much consternation in medical circles. A medical man, Dr. Lorot, was prosecuted last year before the Correctional Tribunal of the Seine, under circumstances that gave rise to the question whether the law applied in the case of a medical man who himself injected into his own patients an antituberculous serum of his own discovery and preparation, without first obtaining the required Government authorisation. The tribunal acquitted him, holding that there had not been any issue of the serum. On appeal by the Procureur Général the case was taken into the courts, but the Chamber of Correctional Appeals confirmed the decision of the previous judges. The Procureur Général, however, carried the case to the Criminal Chamber of the Court of Cassation, which quashed the decree of the Chamber of Correctional Appeals that had acquitted Dr. Lorot. It follows from this judgment that a medical man cannot, under penalty of the law, inject his own patients with a serum of his own manufacture without first obtaining the Government authorisation. The Criminal Chamber will determine later the court before which Dr. Lorot is to be brought.

Sept. 4th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Report of the Canadian Commission of Conservation for 1910.

THE reports of agricultural surveyors of Canada for 1910 to the Commission of Conservation, which have now appeared, have many interesting medical points in them. In Prince Edward Island 97 per cent. of the inhabitants obtain their water-supply from wells, but no typhoid fever has been reported from any of the farms on the island during the past ten years. In Nova Scotia 74 per cent. of the inhabitants depend on wells and 21 per cent. on springs. In the same period 2 per cent. of the farms have reported typhoid fever. In New Brunswick 60 per cent. depend on wells and 35 per cent. on springs, while typhoid fever appeared on no fewer than 11 per cent. of the farms. According to the report this large percentage of disease goes to show great carelessness regarding the water-supply and the sanitary conditions of the farmhouses and premises. In the English-speaking part of the Province of Quebec 100 per cent. depend on wells, many of them poorly protected, and 5 per cent. of the farms have reported typhoid fever. In the French-speaking part of Quebec the water-supply is furnished by rivers, pipe lines, springs, and wells; 13 per cent. of the farms have reported typhoid fever. In Manitoba 100 per cent. depend on wells, and 6 per cent. of the farms have reported typhoid fever. In Saskatchewan over 80 per cent. depend on wells, and 7 per cent. of the farms have reported typhoid fever. In Alberta 90 per cent. depend on wells, but no cases of typhoid fever have been reported. In British Columbia about 40 per cent. of the inhabitants depend on wells, and 3 per cent. of the farms have reported typhoid fever. The reports also show that with regard to coal mine accidents fatalities therefrom are considerably higher in the United States and in Canada than in any other country of the world for which accurate statistics are available. Furthermore, the fatalities in the United States and in Canada are on the increase, while Great Britain, Belgium, Russia, and France show a gradual decrease. This state of affairs is thus commented on in the report: 1. The danger inherent in the work can never be entirely eliminated, but may be brought down to a minimum, as indicated by the low, constant death-rate in Belgium, Great Britain, and France. 2. Coal explosions occur very frequently in Canada and the United States, while they are more infrequent in other countries. It is not reasonable to expect that the loss of life and property can be entirely done away with, but at the same time experience has abundantly proved that careful and impartial investigations of such conditions will point the way to the remedying of at least some of the abuses.

Ottawa Typhoid Fever Epidemic.

An official report has appeared on the epidemic of typhoid fever which occurred in the city of Ottawa during the early spring of this year. By a process of elimination, milk, food-supplies, insanitary conditions, sewage, flies, and dust were excluded as primary causative factors, and consequently the only other common factor, water, remained. The immediate cause of the epidemic, which began in Ottawa on Jan. 1st, 1911, according to the report, was infection of the water-supply. The pollution of the water-supply began at about the middle of December, 1910, and was mainly due to the unusual lowness of the river and the freezing of the shallow places to the bottom, thus diverting the currents of polluting matter into the sources of public water-supply. The outbreak of the epidemic is now attributed to carelessness on the part of those responsible for the supervision of the water-supply of the city, who, firstly, allowed an old acqueduct to be converted into a sewer, and, secondly, neglected to follow the recommendation, made in October,

that the drinking-water of Ottawa should be subjected to treatment by hypochlorite of lime. The continuance and spread of the epidemic appear to have been due to various obvious causes, such as contact with persons ill of the disease and defective plumbing. Several points of interest were brought out in the investigation by the committee, for instance, that slums and insanitary conditions existed in Ottawa to an extent hitherto unthought of. The great lesson, however, to be learned from the typhoid outbreaks in Montreal, Toronto, Ottawa, and in other parts of Canada is that the only sure mode of protecting the public against the attacks of water-borne diseases is by the installation of an effective filtration system with, what is more important, the provision of adequate storage.

August 30th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

The Retirement of Government Health Officers.

THE proposal of the Government to retire Dr. A. John Gregory, the medical officer of health for Cape Colony, and Dr. G. Pratt Yule, the medical officer of health for the Orange Free State, was alluded to recently in THE LANCET.[1] It is now officially stated that the Government also proposes to retire Dr. E. Hill, the medical officer of health for Natal. This will leave only two comparatively junior Government health officers on the active list for duty in South Africa, and obviously this staff will be hopelessly inadequate. The decision of the Government, particularly in regard to Dr. Gregory, has provoked the utmost indignation throughout South Africa, and strong resolutions protesting against the proposal of the Government to retire Dr. Gregory have been passed by numbers of professional, municipal, and other public bodies. On July 7th, for instance, the subject was brought forward specially at the Western Cape Branch of the British Medical Association. At this meeting Mr. H. A. Moffat, in moving resolutions dealing with the matter, reviewed briefly the history of the agitation by the profession since the Union for the creation of a department of public health with a medical officer as its administrative head. He pointed out that there was one, and only one, obviously suitable man in South Africa to fill such a post—namely, Dr. Gregory. His length of service, great experience as an organiser and administrator, singled him out above all others. His claims were best shown by the history of public health administration in Cape Colony. There had been a gradual recognition of the importance of its administration, and there had been a gradual increase in powers accorded to the medical officer of health, until in 1907 a definite department had been created with Dr. Gregory as its administrative head. Dr. Gregory, during the whole 20 years of his service, had fought for the best form of public health administration and had finally gained it for the people of Cape Colony. The creation of the department in the Cape was the most eloquent tribute to Dr. Gregory as an organiser and administrator. He had successfully overcome the deep-rooted prejudice of Ministers, and had shown that a medical man could be entrusted with administrative duties. Dr. Gregory was a strong man and he had not chosen the paths of least resistance which would have brought him popularity. Instead he had pursued undeviatingly what he considered best for the country. Dr. A. Jasper Anderson, medical officer of health for Cape Town, in seconding the resolution, pointed out the arduous work Dr. Gregory had had to do as a pioneer in public health. He had been the first Government medical officer of health in South Africa. His had been a most difficult post to fill—one which had brought him into opposition to all sorts of vested interests and prejudices. Dr. Gregory's signal devotion to duty had always been most striking, and he had earned the gratitude and respect of all local authoritiees throughout the Province. Dr. Anderson supported the resolutions in their entirety because it was detrimental to the public interest to retrench an officer of such ripe experience and ability. Dr. Hewat, the president, expressed his accord with the resolutions, for he felt that it was impossible to find another man with the same practical knowledge of conditions in South Africa and of what was not merely theoretically desirable but of what was actually possible. He regarded Dr. Gregory's retirement, at an age when he was at his best and when his service would have been invaluable, as an immense loss to the State. A number of other members also spoke in a similar strain, and the following resolutions were then put and carried unanimously:—

1. This association learns with deep regret that the services of Dr. Gregory are to be dispensed with by the Union Government, and desires to record its sense of the signal value of Dr. Gregory's services as medical officer of health for the Cape Colony, and its appreciation of his devoted energy, integrity, courage, and ability in that capacity.

2. That the Association wishes to voice its convictions that in the organisation of the Public Health Department of the Union the services of Dr. Gregory, an officer of unrivalled experience and tried qualities, should have been retained to direct such organisation.

3. This Association is greatly concerned that the medical officer of health for the Union has not yet been appointed, as such appointment was definitely promised in Parliament by the Minister for the Interior.

It was also resolved that a copy of these resolutions, which are similar to those passed by other branches of the British Medical Association, should be forwarded to the Governor-General in Council, each Member of the Cabinet, the Executive Committee of the Province, the Council of every Municipality throughout the Union, the press, and Dr. Gregory. The Medical Council of the Cape, which is vested with certain advisory functions in regard to public health by statute, at its meeting on July 4th expressed itself in even stronger terms, for the following resolution was then passed:—

That this council deeply regrets the loss of Dr. A. John Gregory, one of its most valuable members, and takes this opportunity of expressing its grateful appreciation of the services rendered by him to it during his 11 years of membership. At the same time this council wishes to protest strongly against the failure of Government to recognise and retain for the Union the unrivalled knowledge and experience gained by Dr. Gregory during nearly 20 years of devoted service, and would further point out that the way in which the health department has been abolished and its head got rid of is contrary to the interests of the country and fraught with grave danger. That this be sent to the Minister for the Interior, the Acting Prime Minister, the Administrator and Council of the Cape Province, and to Dr. Gregory.

Discontent in the Profession.

As a result of the retirement of the three medical officers of health, there is grave discontent in professional circles with the Government. Medical men in other branches of the civil service appear to be realising that the State no longer offers security of tenure to its servants, and there may be difficulty in the securing of good men to fill posts as they fall vacant. Already several subordinate medical officials have handed in their resignations, and it is stated that others will follow suit as opportunity for other employment offers. Amongst those leaving the service shortly may be mentioned Dr. J. C. Mitchell, Government bacteriologist and pathologist for the Transvaal, who has secured the appointment of medical superintendent of the Transvaal Miners' Phthisis Sanatorium at Springkell. The general feeling of discontent has been still further accentuated by the manner in which the patronage of Ministers has been used in the filling of vacant district surgeoncies and other appointments of a similar character.

The Transmission of Leprosy.

The last International Conference on Leprosy held at Bergen suggested that leprosy might possibly be spread by the biting of insects. In a recent issue of the *South African Medical Record* appeared two papers on this subject by Mr. E. C. Long, principal medical officer, Basutoland, and Dr. T. L. L. Sandes, research medical officer, Robben Island. They have apparently been working independently of each other, and both show that bugs fed on the leprous nodules of patients contain in a fair proportion of cases, when killed and the alimentary tracts and contents are examined, bacilli which in shape, size, and staining reactions are similar to the bacillus lepræ. Dr. Sandes states that on May 2nd last he fed some bugs on a case of tubercular leprosy suffering from an acute exacerbation of the disease. On the 15th they were again fed on the same patient. Next morning one of them was found dead. In a smear made from the stomach contents there were a few bacilli, but in smears made from the body tissues field after field displayed numerous acid-fast bacilli. The appearance of these differed, in Dr. Sandes's opinion, from the classic lepra organisms. He states that they were shorter, and some almost coccoid; also that they were more homogeneous in staining, displayed no granularity, had occasionally a median

[1] THE LANCET, August 12th, p. 481.

constriction, and occasionally a terminal clubbing. The great majority were arranged in groups, the individuals in the groups showing a tendency to adhere in parallel formations. Dr. Sandes considered these to be young lepra bacilli in full prolific activity, not having as yet assumed the senile or degenerative forms usually observed in the impacted bacillary masses of human tissues. Dr. Sandes on comparing the organisms from this bug with those from cultures believes them to be identical.

South African Scurvy.

For some years past many practitioners have held the view that "scurvy" as met with in South Africa is different from the disease as met with elsewhere. For instance, it does not appear to follow deprivation of any special article of diet, is not quickly curable, and it appears to have a distinct seasonal variation. Years ago Dr. A. J. Gregory stated his belief that the disease was infectious, and that either the etiology of scurvy has been misunderstood or that the disease if not scurvy is an unrecognised disease simulating scurvy. In recent numbers of the *Transvaal Medical Journal* a lengthy article has appeared from the pen of Dr. W. Morton Hewetson, medical officer to the Wankie Colliery Company, Southern Rhodesia, entitled "The Etiology of Scurvy," which has attracted considerable attention. It would, however, appear very doubtful whether the author is describing the disease regarded elsewhere in South Africa as scurvy. It would seem rather to be pyorrhœa alveolaris, which is very common amongst native labourers. This is a disease, associated often with scurvy it is true, which is mildly infectious, occurs at certain seasons of the year, is unaffected by alterations in diet, is usually unaccompanied by other symptoms, and is readily cured by local treatment. Although Dr. Hewetson's paper has come in for considerable criticism at the hands of the profession, it is possible that the pyorrhœa alveolaris as met with in the compounds may be an early symptom of so-called "scurvy," and one would like to see research work undertaken from a bacteriological standpoint. There is no doubt that diet does play an important rôle in the causation of both conditions, but it is not an important factor in the cure of local inflammation of the gums. It is, however, a factor of great importance in the cure of South African "scurvy." The infectiousness of "scurvy" is now being more and more recognised. For instance, several district surgeons, on a prisoner being admitted to gaol with symptoms of "scurvy," insist on his isolation if possible, and if this cannot be done they prepare themselves for an outbreak of the disease.

Illicit Liquor Trading.

In spite of drastic legislation, the illicit selling of liquor to natives is on the increase, particularly on the Rand and in other mining areas. The traffic is causing much anxiety to those interested in the welfare of the native races of South Africa. It is not as though a sound liquor is supplied; on the contrary, most of that confiscated from time to time by the police is found to be a vile compound, of which "dop" brandy is the principal constituent. It is usually faked with Cape sherry and often fortified with rectified or even methylated spirit. It is often flavoured with bluestone, tobacco, or other deleterious substances. The effect of drinking such a liquor may be imagined. It is disastrous morally and physically; it is responsible undoubtedly for much of the crime on the Rand and elsewhere, and for much of the ill-health amongst native mine-workers, for which the former place particularly has become notorious. The profits are so enormous that the traffic is never likely to be suppressed under present conditions. There are some thinking men who hold that reasonable facilities should be afforded natives for obtaining pure liquors under official observation and regulation. Public opinion would not, however, tolerate this, but most practitioners would agree to a measure permitting the manufacture and sale of good kaffir beer. This is a native beverage which is harmless if not fortified by the addition of spirit. It is, moreover, an excellent anti-scorbutic. If the sale of this article of drink were legalised, and the existing laws relating to the sale of other liquors remained in force, the traffic in "fire-water" would be greatly diminished, if not entirely suppressed. The existing state of affairs demands rectification, but it is doubtful whether the problem will ever be tackled properly by the Government owing to the risk of alienating adherents with temperance sympathies.

Transfer of a Well-known Official.

Mr. Leonard Bostock, the well-known authority on malaria, who contributed a valuable chapter on the subject as relating to the Transvaal, in Sir Ronald Ross's latest book, "The Prevention of Malaria," has resigned his appointments as railway medical officer and district surgeon at Komatie Poort in the Transvaal, and has left to take up an appointment at Porto Amelia in Portuguese Nyassaland. Mr. Bostock has done much good anti-malarial work in the Transvaal, and the Portuguese authorities are to be congratulated on securing his services.

July 25th.

Obituary.

LEONARD CANE, M.D., B.S. LOND., M.R.C.S. ENG., L.S.A.,

CONSULTING PHYSICIAN TO THE PETERBOROUGH INFIRMARY.

Leonard Cane was born at Chichester on July 31st, 1848. He came of a professional stock, no fewer than 24 of his near relatives having been members of the medical profession. After leaving school he became a pupil of his uncle, Dr. Leonard Buckell of Chichester, with whom he lived for five years. During that time he matriculated at the University of London and passed the Preliminary Scientific Examination. In October, 1867, he entered upon his professional studies at University College, London, where he obtained the Atkinson Morley scholarship (£135), the Liston gold medal for clinical surgery, the gold medal for medicine, silver medals for clinical medicine, anatomy and physiology, and other distinctions. At University College Hospital he studied under the eminent men then connected with it, notably Sir William Jenner, Sir J. E. Erichsen, Sir J. Russell Reynolds, and Sir Henry Thompson, and had as fellow students and friends many who have since risen to great eminence in their profession, amongst whom may be mentioned Sir Thomas Barlow and Sir John Tweedy. Dr. Cane took the degree of M.B., B.S. Lond. in 1872, graduating with honours in both. He took the degree of M.D. Lond. in 1873, and held also the diplomas of M.R.C.S. Eng. and L.S.A. In 1875 he went into partnership with Mr. Thomas Southam of Peterborough, an old-established practitioner of that city. Here he succeeded in making a large general practice, and held several public appointments. In 1876 he was elected consulting surgeon to the Peterborough Infirmary, and in 1895 he was elected physician, which post he held until 1906, when he was compelled by paralysis agitans to retire from practice. He then went to reside at Eastbourne where he had built a house at the foot of the Downs.

Dr. Cane had three sons and one daughter. The eldest son, who took his M.D. degree at Cambridge a few months before his father's death, succeeded him in the practice at Peterborough and was appointed assistant physician to the infirmary. The second son joined the Royal Army Medical Corps, and the third son is also entering the profession. Here, indeed, is a family in whom the hereditary instinct for medicine, to which we alluded in these columns recently as becoming less pronounced, is extraordinarily in evidence. But that so first-class a practitioner of our science and art as he whose death we are now recording should have been closely followed by his children is not perhaps extraordinary, for as well as the example of a father they had that of a brilliant expositor always before them.

ARTHUR BEADLES, M.R.C.S. ENG., L.S.A.

THE death is announced of Mr. Arthur Beadles of Forest Hill, who died at Dover on August 19th. He was the son of John Nathaniel Beadles, who practised as a medical man at Broadway, Worcestershire. Arthur Beadles was educated at Irving's School, Mitcheldean, Gloucestershire, and in 1856 was apprenticed to his father in accordance with the usual routine of the day. After four years of this practical training he entered the medical school at Westminster Hospital, and obtained his diplomas in 1862 and 1863. After holding office as house surgeon at the Westminster Hospital, in 1866 he settled at Forest Hill, and there for many years he was one of the hardest worked of men in a large practice which he made

for himself. His powers of observation and his common-sense gave him a breadth of view and a grasp of many of the problems of clinical medicine that rightly inspired confidence in the public. For many years he was frequently hampered by recurrent attacks of rheumatic iritis. These were attended with gradual impairment of sight, which at last compelled his complete retirement in 1907 to Dover, where he died on August 19th. He was buried hard by the scene of his life's work at Elmer's End on August 23rd.

Dr. Eustace Smith sends us the following personal appreciation:—"Mr. Arthur Beadles was for many years the principal practitioner at Forest Hill, where his abilities and professional skill were universally recognised and esteemed. He was one of the old school of family physicians who brought a large fund of common-sense to bear upon his treatment, and whose intimate knowledge of drugs and their uses enabled him to treat the ailments and diseases of his patients with a readiness of resource and a success which commanded at once their gratitude and admiration. Mr. Beadles was in practice for many years before the days of microbes, but he was careful, in spite of his many engagements, to keep himself abreast of the advances of medical science, although he was never led by the allurements of the microscope or the charms of bacteriological research to forget that the primary object of his calling was the alleviation of suffering, to which his life was devoted. His amiable disposition and kindness of heart endeared him to all who had the privilege of his friendship, and his intellectual gifts and keen interest in literature and the arts made him a welcome companion. His loss will be felt by many besides the members of his own family."

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Jonas Baron, professor of surgery in Budapest. Dr. Felici Filippo, *privat docent* of medical pathology in the University of Rome. Dr. T. Place, formerly professor of physiology in the University of Amsterdam. Dr. P. Girot, professor of natural history in the Clermont Medical School. Dr. L. Bruandet, professor of anatomy in the Rheims Medical School.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Külbs of Kiel has been recognised as *privat-docent* of Medicine.—*Bologna:* Dr. Teresio Rezzia has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Gratz:* Dr. Paul Mathies, *privat-docent* of midwifery, and Dr. Hans Spitzy, *privat-docent* of orthopædic surgery, have been granted the title of Extraordinary Professor.—*Heidelberg:* Dr. Tobler, *privat-docent* of pædiatry, has been granted the title of Extraordinary Professor. Dr. August Homburger has been recognised as *privat-docent* of Psychiatry.—*Innsbruck:* Dr. W. Trendelenburg of Freiburg has been appointed to the chair of Physiology in succession to Dr. F. Hofmann.—*Lemberg:* Dr. Paul Kucera, Extraordinary Professor of Hygiene, has been promoted to the Ordinary Professorship.—*Marseilles:* Dr. Olmer has been appointed Professor of Hygiene and Forensic Medicine in succession to the late Dr. Fallot.—*New York (College of Physicians and Surgeons):* Dr. Horatio B. Williams has been appointed Adjunct Professor of Medical Entomology.—*Prague (German University):* Dr. Hermann Schloffer of Innsbruck has been appointed to the chair of Surgery in succession to Dr. Wölfler.—*Rome:* Dr. Arsenio Brugnola of Sarsari has been recognised as *privat-docent* of Medical Pathology.—*San Francisco (University of California):* Dr. J. G. Fitzgerald has been appointed Adjunct Professor of Bacteriology.—*Sienna:* Dr. Luigi Rugani of Turin has been recognised as *privat-docent* of Laryngology and Otology.—*Tübingen:* Dr. A. Basler, *privat-docent* of Physiology, has been granted the title of Extraordinary Professor.

LITERARY INTELLIGENCE.—Messrs. J. and A. Churchill announce the ninth edition of Dr. Frederick Taylor's "Practice of Medicine." The work, which will be in a larger form, has been very thoroughly revised. Considerable alterations and additions have been made in dealing with the subjects of cholera, dysentery, aphasia, hysteria, obstruction of the bronchi, phthisis, the physical examination of the heart and vessels, colitis and appendicitis, ankylostoma, gall-stones, anæmia and leukæmia, diabetes, and functional albuminuria. The subjects new to this edition are pellagra, meralgia paræsthetica, pneumococcal meningitis, myotonia congenita, enterospasm, Hirschsprung's disease, intermittent claudication, congenital family cholæmia, peritoneal adhesions, lymphatism, bacilluria, and pneumaturia. The illustrations in the text have been increased.—Mr. William Heinemann of Bedford-street, Strand, will in the autumn publish a work by Dr. Nansen, entitled "Through Northern Mists," in two quarto volumes; it will be illustrated from old charts and engravings, as well as from drawings by the author. The same publisher also announces, under the title of the "Modern Criminal Science Series," translations of some of the most interesting volumes by continental writers on different phases of crime and criminality. The first four to appear will be: "Criminal Psychology," by Hans Gross; "Modern Theories of Criminality," by C. Bernaldo de Quiros; "Crime: its Cause and Remedies," by Cesare Lombroso; and "Criminal Sociology," by Enrico Ferri.

THE THIRD CONGRESS OF THE INTERNATIONAL SOCIETY OF SURGERY.—The following is the programme of the Third Congress of the International Society of Surgery, which will take place this month at Brussels:—Sept. 25th: 2.30 P.M., Meeting of the International Committee. 8 P.M., Reception to the members of the Congress by Professor Dr. Lorthioir, President of the Belgian Society of Surgery. Sept. 26th: 9.30 A.M., Formal opening of the Congress; opening of the Exhibitions of Fractures and of Surgical Apparatus. 10.30 A.M., The Diagnosis of Pancreatitis, by Professor Dr. Gaston Michel of Nancy. 2 P.M., The Treatment of Pancreatitis, by Professor Dr. W. Körte of Berlin and M. Giordano. 9 P.M., Reception to the members of the Congress by Professor Lucas-Championnière, President of the International Society of Surgery. Sept. 27th: 9 A.M., Pneumothorax, Ways and Modes of Access; Emphysema, by M. Garré of Bonn; Acute Purulent Pleurisy, by Professor Dr. H. Gaudier of Lille; Pleural Fistulæ, by M. Girard. 2 P.M., Pleuro-pulmonary Wounds, by Professor Ch. Lenormant; Pulmonary Tumours and Parasites, by Professor A. H. Ferguson of Chicago. Sept. 28th: 9 A.M., Demonstrations of the Treatment of Fractures. 2 P.M., General meeting. 3 P.M., Pleuro-pulmonary Abscess and Gangrene, by M. Van Stockum; Bronchiectasia, by Professor Sauerbach of Zürich. 7.30 P.M., Banquet. Sept. 29th: 8 A.M., The Surgical Treatment of Pulmonary Tuberculosis, by M. P. L. Friedrich of Marburg. 10 A.M., Acute Colitis, by Professor E. Sonnenburg of Berlin. 3 P.M., Chronic Colitis, by M. Ségond, Dr. C. L. Gibson of New York, Mr. D'Arcy Power of London. Discussions will take place on all the papers. 8 P.M., Special performance at the Théâtre Royal de la Monnaie.

THE BRITISH HOSPITALS ASSOCIATION.—The second annual conference of this association, whose object is to promote the discussion of matters connected with hospital management and to give opportunities for the acquisition of a knowledge of hospital administration, will be held in Manchester on Thursday and Friday, Sept. 28th and 29th. The first day will be devoted to a discussion on the National Insurance Bill and its probable effects upon the voluntary hospitals, in which the following are expected to take part: Sir William Cobbett, chairman, Royal Infirmary, Manchester; Mr. Charles Lupton, chairman, General Infirmary, Leeds; Dr. D. J. Mackintosh, M.V.O., superintendent, Western Infirmary, Glasgow; and Mr. Howard J. Collins, house governor, General Hospital, Birmingham. On Friday papers will be read as follows: (1) Representation of Honorary Medical Staffs upon Boards of Management of Voluntary Hospitals, by Dr. E. S. Reynolds, chairman of the medical board, Manchester Royal Infirmary; and (2) The Methods of Distribution of Hospital Saturday and Sunday Funds, by Mr. Charles Hopkinson, member of the board, Manchester Royal Infirmary. The meetings of the conference will open each day at 10 A.M. in the Lord Mayor's parlour at the Town Hall. Members of the association will be entertained at luncheon each day by the United Hospitals of Manchester, and the Lord Mayor will hold a reception on the afternoon of the first day, while visits of inspection to the various local

hospitals will be arranged. The honorary local secretary is Mr. W. G. Carnt, Royal Infirmary, Manchester. Trustees, members of committees or executive, and professional heads of hospitals and kindred institutions are eligible for membership. Application should be made to Mr. Conrad W. Thies, Royal Free Hospital, London, W.C., the honorary treasurer.

PRESENTATION TO A MEDICAL PRACTITIONER.—Dr. R. F. Gill of King Henry's-road, South Hampstead, who recently retired from active work owing to ill-health, has been presented by his former patients and friends with a cheque for £120 and other gifts as a mark of their esteem.

LONGEVITY.—Mrs. Drew, of Arden Caple House, near Helensburgh, Dumbartonshire, celebrated the anniversary of her hundredth birthday on August 1st, and received a letter of congratulation on behalf of the King. In 1829 Mrs. Drew met and conversed with Sir Walter Scott in her aunt's house at Orbiston, Lanarkshire.

Dr. Halls Dally, whose paper on Pachon's Sphygmo-oscillometer was published in THE LANCET last week, wishes to remedy an oversight in his work. He omitted by accident to refer to a communication on the estimate of blood pressure by means of the sphygmo-oscillometer which was published in the *British Medical Journal* of Dec. 3rd, 1910.

NOTIFICATION OF ACUTE POLIOMYELITIS.—The London County Council has made an Order that in the Administrative County of London, Section 55 of the Public Health (London) Act, 1891, with respect to the notification of infectious diseases, shall apply to acute poliomyelitis or acute polio-encephalitis. The Order, which has been approved by the Local Government Board, came into operation on Sept. 1st, and will continue in force until March 12th, 1912.

THE SOUTHWARK MORTUARY.—At the Southwark coroner's court, on August 30th, Dr. F. J. Waldo again called attention to the necessity for new mortuary accommodation in the district, and said that perhaps an alteration would be made owing to the publicity which had been given to the matter from time to time. If an improvement was made, he thought it would be better for the health of the district, the death-rate of which had been very high. Dr. Waldo further mentioned that every time he called a jury, half an hour or more was wasted owing to the distance of the mortuary from the court. A jury had recently complained that the children in the churchyard playground adjacent to the mortuary were distressed by the foul emanations proceeding from the mortuary. Medical men also objected to making necropsies in such an atmosphere.

LONDON INTER-COLLEGIATE SCHOLARSHIPS BOARD: MEDICAL SCHOLARSHIPS AND EXHIBITIONS.—In addition to the scholarships previously advertised, two scholarships in arts and science and two scholarships in anatomy and physiology, tenable at Charing Cross Hospital Medical School, will be offered for competition at the September examination of the London Inter-Collegiate Scholarships Board. On the results of this examination, therefore, elections will be made to 32 entrance medical scholarships, tenable at the following schools of the University of London: University College, King's College, Westminster Hospital, St. George's Hospital, Charing Cross Hospital, London School of Medicine for Women, University College Hospital, and King's College Hospital. Further information may be obtained from the deans of the respective medical schools, or from the secretary of the board, Mr. Alfred E. G. Attoe, University of London, University College (Gower-street, London, W.C.).

BOOKS, ETC., RECEIVED.

UNIONE TIPOGRAFICO-EDITRICE TORINESE, Torino (Corso Raffaello, 28), Milano, Roma, Napoli.

Prof. D. B. Roncali. Trattato dei Neoplasmi Maligni, preceduto da uno Studio sulle Infezioni Chirurgiche in Generale. Volume primo. Price L.34.

UNIVERSITY OF CHICAGO PRESS, Chicago, Illinois. CAMBRIDGE UNIVERSITY PRESS, London and Edinburgh.

Contributions to Medical Science by Howard Taylor Ricketts, 1870–1910. Published as a Tribute to His Memory by his Colleagues under the Auspices of the Chicago Pathological Society. Price 20*s.* net.

UNWIN, T. FISHER, London.

The Town Child. By Reginald A. Bray, L.C.C. Second edition, revised. Price 3*s.* 6*d.* net.

URBAN UND SCHWARZENBERG, Berlin und Wien.

Die Experimentelle Bakteriologie und die Infektionskranheiten, mit besonderer Berücksichtigung der Immunitätslehre. Ein Lehrbuch für Studierende, Aerzte und Medizinalbeamte. Von Dr. W. Kolle und Dr. H. Hetsch. Dritte, erweiterte Auflage. Zweiter Band. Price of the complete work in two volumes, paper, M.30 or K.36; bound, M.34 or K.40.80.

VOGEL, F. C. W., VERLAG VON, Leipzig.

Spezielle Diagnose der Inneren Krankheiten. Ein Handbuch für Aerzte und Studierende. Nach Vorlesungen bearbeitet von Dr. Wilhelm v. Leube, Professor der medizinischen Klinik und Oberarzt am Juliusspital in Würzburg. I. Band. Achte neu bearbeitete Auflage. Price, paper, M.14; bound, M.15.50.

WILLIAM PEPPER LABORATORY OF CLINICAL MEDICINE, University of Pennsylvania, Philadelphia.

University of Pennsylvania. Contributions from the William Pepper Laboratory of Clinical Medicine. (Reprints.) No. 7. 1909 and 1910. Price not stated.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

The Deaf Child. A Manual for Teachers and School Doctors. By James Kerr Love, M.D., Aural Surgeon, Glasgow Royal Infirmary. Price 4*s.* 6*d.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

FORDE, ROBERT MICHAEL, L.R.C.P. & S. Edin. (Principal Medical Officer), has been appointed an Official Member of the Legislative Council of the Colony of Sierra Leone.

HOLMES, PATRICK JOHN, L.R.C.P. & S. Irel., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Killaloe District of the county of Clare.

KIRK, THOMAS DICK, M.D., M.Ch. R.U.I., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Montgomery District of the counties of Montgomery and Salop.

MATHIESON, D. MORLEY, M.D. Edin., D.P.H., has been appointed Medical Officer of Health and Medical Superintendent of the Infectious Diseases Hospitals for the County Borough of South Shields.

MOXON, HERBERT W., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Matlock District of the county of Derby.

WHELAN, JOHN B. B., M.D. Dub., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Ruskington District of the county of Lincoln.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASHTON-UNDER-LYNE, DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL.—Senior House Surgeon. Salary £120 per annum, with board, residence, and laundry.

AYR DISTRICT ASYLUM.—Junior Assistant Medical Officer. Salary £120 per annum, with board, lodging, and laundry.

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

BIRMINGHAM GENERAL HOSPITAL.—Dental Surgeon. Salary £50 per annum.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £140 per annum, with rooms, rations, laundry, and attendance.

BRADFORD ROYAL INFIRMARY.—House Physician, unmarried. Salary £100 per annum, with board, residence, and washing.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House Surgeon, unmarried. Salary £120 per annum, with apartments, board, attendance, &c.

BRIGHTON AND HOVE HOSPITAL FOR WOMEN.—House Surgeon, unmarried, for six months. Salary £80 per annum, with apartments, board, attendance, &c.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer for six months. Salary at rate of £50 per annum, with board, lodging, and washing. Also House Surgeon. Salary £100 per annum, with apartments, board, and laundry.

CANCER HOSPITAL, Fulham-road, London, S.W.—House Surgeon for six months. Salary £70 per annum.

CARLISLE DISPENSARY.—Resident Medical Officer. Salary £150 per annum, with apartments.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £70 per annum, with board, apartments, and laundry.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and residence.

CROSSLEY SANATORIUM, Delamere Forest, Cheshire.—Assistant Medical Officer. Salary £100 per annum, with board, apartments, and laundry.

DEVONPORT, ROYAL ALBERT HOSPITAL.—House Surgeon, unmarried. Salary £125 per annum. Also Assistant House Surgeon, unmarried, for six months. Salary at rate of £75 per annum. With board, apartments, laundry, &c., in each case.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, and washing.

DUNFERMLINE, CARNEGIE DUNFERMLINE TRUST.—Assistant Medical Officer. Salary at rate of £250 per annum.

EALING, KING EDWARD MEMORIAL HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £80 per annum, with board, apartments, and laundry.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician and House Surgeon. Salary in each case at rate of £75 per annum, with board, residence, and laundry.

EDINBURGH SCHOOL BOARD.—Assistant Medical Officer. Salary at rate of £250 per annum.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—House Physician and Assistant House Surgeon for six months. Salary at rate of £60 per annum, with board, apartments, and washing.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Resident Medical Officer. Salary £120 per annum, with board, lodging, and laundry.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—House Physician for six months. Salary at rate of £70 per annum, with board and residence.

HASTINGS, EAST SUSSEX HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with residence, board, and washing. Also Assistant House Surgeon. Salary at rate of £50 per annum with residence, board, and washing.

HEMEL HEMPSTEAD, HERTS, WEST HERTS HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with rooms, board, and washing.

HOLBORN UNION INFIRMARY, Archway-road, Upper Holloway, N.—Second Assistant Medical Officer. Salary £80 per annum, with board, apartments, and washing.

LEAMINGTON SPA, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with residence, board, and laundry.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

LEICESTER BOROUGH LUNATIC ASYLUM.—Medical Superintendent. Salary £800 per annum.

LEICESTER INFIRMARY.—House Physician. Salary at rate of £100 per annum, with board, lodging, and washing.

LEITH HOSPITAL.—Out-door Visiting Physician for six months. Salary at rate of £100 per annum, with board.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary £120 per annum, with apartments, board, washing, attendance, &c.

LIVERPOOL DISPENSARIES.—Head Surgeon, unmarried. Salary £170 per annum, with board and apartments. Also Assistant Surgeon, unmarried. Salary £100 per annum, with board and apartments.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.

LONDON COUNTY COUNCIL.—Medical Officer of Health of the County of London. Salary £1250 a year and travelling expenses.

MARGARET-STREET HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, 26, Margaret-street, W.—Honorary Physician. Also Honorary Dental Surgeon.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, and washing.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich road, S.E.—Senior and Junior House Surgeon, each for six months. Salaries at rate of £100 and £80 per annum respectively, with apartments, board, attendance, and laundry.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, with apartments, attendance, &c.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and washing.

PETERBOROUGH INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with residence, board, and laundry.

PRESCOT UNION WORKHOUSE AND INFIRMARY, Whiston.—Resident Assistant Medical Officer, unmarried. Salary £120 per annum, with apartments, board, washing, &c.

PRESTON ROYAL INFIRMARY.—Senior House Surgeon, unmarried, for six months. Salary £80 per annum, with board, residence, and washing.

PRETORIA LUNATIC ASYLUM.—Junior Medical Officer. Salary £360 per annum, with quarters, rations, fuel, light, washing, and attendance.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer for four months. Salary at rate of £60 per annum, with board, residence, and washing.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, N.E.—House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

RAROTONGA, COOK ISLANDS.—Assistant Medical Officer. Salary £350 per annum.

ROCHDALE INFIRMARY.—Senior House Surgeon, unmarried. Salary £100 per annum, with board, residence, and laundry.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at rate of £60 per annum, with board, lodging, and washing.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Third House Surgeon. Salary at rate of £50 per annum, with board and residence.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL.—Resident House Surgeon, unmarried, for six months. Salary £100 per annum, with board, residence, and washing.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Honorary Dental Surgeon.

ST. PETER'S HOSPITAL FOR STONE, &c., Henrietta-street, Covent Garden, W.C.—Junior House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Resident House Surgeon. Salary £80 per annum, with board and residence.

STAFFORD, STAFFORDSHIRE COUNTY ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, and washing.

STOCKPORT INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, washing, and residence.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House Surgeon for six months. Salary at rate of £70 per annum, with board, lodging, and laundry.

WALSALL AND DISTRICT HOSPITAL.—House Physician and Casualty Officer. Salary £80 per annum, with board, residence, and laundry.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford, E.—Junior House Physician. Salary £75 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Act at Slaithwaite, in the West Riding of Yorkshire.

Births, Marriages, and Deaths.

BIRTHS.

BUTT.—On August 31st, at Randfontein, Transvaal, the wife of H. T. Hayward Butt, M.B., M.R.C.S., L.R.C.P., of a son.

HANSON.—On Sept. 5th, at Frognal, Hampstead, the wife of Reginald John Edward Hanson, F.R.C.S E., of a son.

HEATH.—On August 31st, at Weymouth-street, W., the wife of P. Maynard Heath, M.S., F.R.C.S., of a son.

NIMMO.—On August 7th, at Chakrata, United Provinces, India, the wife of Captain Wilfrid C. Nimmo, R.A.M.C., of a daughter.

PORTER.—On August 29th, at St. James's-road, Surbiton, the wife of George Porter, M.D., of a daughter.

MARRIAGES.

BRUCE—OWEN.—On August 31st, at St. Michael's, Playden, by the Rev. J. Casper Lintott, Harold Wilson Bruce, M.D., to Ethel Madeline, second daughter of the late Frank Owen of Rye.

DICK—DUKE.—On August 30th, at St. Andrew's Church, Muswell Hill, John Lawson Dick, M.D., F.R.C.S., to Norah Winiefred, daughter of the late Captain W. E. Duke.

GOODING—SEEL.—On Sept. 2nd, at the Church of the Holy Innocents, South Norwood, Simonds Gooding, M.D., to Edith May, daughter of Thomas J. Seel.

MORLEY—DIXEY.—On Sept. 1st, at Union Chapel, Islington, Edwin B. Morley, M.B., B.S., to Ada Mary, daughter of Albert Dixey.

ROBERTS—NICHOLSON.—On August 31st, at St. Michael's Church, Hoveringham, Notts, by Rev. J. E. Kent, M.A., Chaplain to Royal Army Medical Corps, Territorial, and Rev. A. M. Y. Bailey, M.A., Vicar, Charles Roberts, F.R.C.S., to Ethel, second daughter of Arthur Nicholson, of Burnside, Hoveringham. At home, Ravensbourne, Victoria Park, Manchester, Oct. 24th, 25th, and 26th.

WARING—RELTON.—On August 29th, at St. John's Cathedral, Hong-Kong, Captain Arthur Durham Waring, R.A.M.C., to Gladys Frances Lyons Relton, daughter of Arthur John Relton.

DEATHS.

CANE.—On Saturday, Sept. 2nd, at St. Oswald's, Meads, Eastbourne, Leonard Cane, M.D., aged 63, late of the Mansion House, Peterborough. Cremated at Golder's Green on Wednesday, Sept. 6th, at 2.30 P.M.

WYNNE.—On Sept. 1st, at Eryl Môr, Newquay, John Kendrick Wynne, M.D.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

HUSTLE.

THE following breathless itinerary was handed to a correspondent of THE LANCET by the cicerone of a party of Americans from the Southern States who were "doing the English lakes" between the evening of one day and the afternoon of the next. The travellers were not unintelligent. Indeed, they were mostly ladies with the courtesy of manner which American writers claim to be peculiar to Georgia and Virginia. This demeanour was in strange contrast to the austere bluffness of the people among whom for a brief spell they found themselves. Naturally they looked excessively tired, and the medical eye discovered among them the traces of dyspepsia and nerve-strain due to accomplishing a tour almost identical with that here printed. The document *donne furieusement à penser* both on psychological and hygienic grounds. It is also an ethnological curiosity.

VISITING ENGLAND, FRANCE, BELGIUM, HOLLAND, GERMANY, AUSTRIA, SWITZERLAND, AND ITALY.

July 22nd, Saturday.—Sail on ss. *Cincinnati* (18,000 tons), Hamburg-American Line ($105.00 berth).

July 31st, August 1st, 2nd, 3rd, 4th, Monday, Tuesday, Wednesday, Thursday, and Friday.—In London.

August 5th, Saturday.—Leave for Paris *viâ* Newhaven-Dieppe, stopping at Rouen.

August 6th, 7th, 8th, 9th.—In Paris (Grand Hotel du Louvre).

August 10th, 11th, 12th, Thursday, Friday, and Saturday.—Motor *viâ* Versailles to Blois, to Orleans, Touraine Country, Fontainebleau, and return to Paris.

August 13th, Sunday.—In Paris.

August 14th, Monday.—To Brussels.

August 15th, Tuesday.—In Brussels (Grand Hotel).

August 16th, Wednesday.—Leave *viâ* Antwerp to the Hague.

August 17th and 18th.—In the Hague and Scheveningen (Hotel Paulez).

August 19th and 20th, Saturday and Sunday.—Amsterdam and Isle of Marken (Hotel Victoria.)

August 21st, Monday.—To Cologne (Hotel Disch).

August 22nd, Tuesday.—Up the Rhine to Mayence (Rheinerscherhof).

August 23rd, Wednesday.—*Viâ* Wiesbaden to Heidelberg.

August 24th, Thursday.—In Heidelberg (Schloss Hotel).

August 25th, Friday.—Leave for Munich.

August 26th, Saturday and Sunday.—In Munich (Hotel Bellevue).

August 29th, Tuesday.—Down Danube to Vienna.

August 30th and 31st, Wednesday and Thursday.—In Vienna (Hotel Metropole).

Sept. 1st, Friday.—To Innsbruck.

Sept. 2nd, Saturday.—To Lucerne.

Sept. 3rd.—In Lucerne (Hotel des Balances).

Sept. 4th, Monday.—Travel *viâ* lake and train to Andermere and coach over Furka Pass to Rhine Glacier (Rhine Glacier Hotel).

Sept. 5th, Tuesday.—Coach 32 miles along the Rhone River to Brieg and train to Zermatt.

Sept. 6th and 7th, Wednesday and Thursday.—In Zermatt (Mont Cervin Hotel).

Sept. 8th, Friday.—Leave *viâ* Visp to Brieg and coach over the famous Simplon Pass to Pallanza along Lake Maggiore (Grand Hotel Pallanza).

Sept. 9th, Saturday.—Italian Lakes to Milan.

Sept. 10th, Sunday.—Morning to Milan and afternoon to Venice.

Sept. 11th, 12th, 13th.—In Venice (Grand Hotel on Grand Canal).

Sept. 14th, Thursday.—To Rome.

Sept. 15th, 16th, 17th, 18th, 19th, 20th.—In Rome (Hotel Michel).

Sept. 21st, Thursday.—To Naples (Grand Hotel Santa Lucia).

Sept. 22nd, 23rd, 24th.—Pompeii, Sorento, Capri, and in Naples.

Sept. 25th, Monday.—To Florence.

Sept. 26th, 27th, 28th, 29th.—In Florence (Grand Hotel de la Ville).

Sept. 30th, Saturday.—*Viâ* Pisa to Genoa.

Oct. 1st, Sunday.—Afternoon to Monte Carlo.

Oct. 2nd, Monday.—Motor over Upper Corniche Road to Nice and train to Marseilles.

Oct. 3rd, Tuesday.—To Paris.

Oct. 4th and 5th.—In Paris.

Oct. 6th.—Sail *viâ* s.s. *Bluecher*, Hamburg-American Line ($90.00 berth).

Oct. 14th.—Due in New York.

HOSPITALS AND CHARITABLE INSTITUTIONS IN URUGUAY.

His Majesty's Minister in the Republic of Uruguay, Mr. R. J. Kennedy, in his annual report, states that the total population is a little over 1,000,000, and includes 1324 British subjects. Only those are returned under this head who were born outside of Uruguay; children born in the country of British subjects are Uruguayans, enjoying all the privileges and liable to all the obligations appertaining to Uruguayan citizenship. In 1886 a National Commission of Charity and Public Benefaction was created as a State institution under the supervision of the Ministry of the Interior. The Hospital of Charity was placed under the management of this Commission, and the property held by it is valued at £570,000; the principal source of revenue, amounting annually to about £270,000, is the profit derived from the sale of State lottery tickets. A charge, fixed periodically by the Commission, is made for admission to the various institutions under its management. Amongst these may be mentioned the Orphans and Foundlings Asylum, the Mendicants and Incurables Asylum, the Lunatic Asylum, the Isolation Hospital for Infectious Diseases, three asylums for children between the ages of 2 and 8 years, and a deaf and dumb institute. The cost of maintenance in these institutions is estimated per month as follows: Monte Video Hospital of Charity, £4 2*s.* *d.*; Mendicants and Incurables Asylum, £1 18*s.* 4*d.*; Orphans and Foundlings Asylum, £2 9*s.* 5*d.*; Lunatic Asylum, £1 8*s.* 6*d.*; Isolation Hospital, £4 12*s.* 4*d.* Besides these institutions there are in Monte Video several private hospitals and nursing homes, and a British, an Italian, and a Spanish hospital; also, all the chief provincial towns are provided with hospitals managed by the local authorities. During the year 1910 617 indoor patients were treated at the British Hospital, and of this number 437 were discharged as cured and 94 as improved.

The British Hospital was founded 22 years ago as a British seamen's hospital, and is probably at the present time the best managed hospital institution in Monte Video. It contains accommodation for about 50 patients, including paying patients who occupy private or semi-private rooms, and it receives sick persons of all nationalities on the recommendation of subscribers, preference being always given to British or North American nationality. The building occupied by the hospital is old and out of date, and for several years this has been impressed upon those interested. A new and up-to-date building in a more suitable place than its present overcrowded locality has been greatly needed, but the difficulty with which the hospital committee (of which the British Minister is *ex-officio* chairman) was confronted was the want of funds. This has now been solved by devoting to the building of a new hospital the subscriptions paid into the King Edward VII. Memorial Fund. Nearly £6000 are thus available, and that sum, together with the estimated value of the old hospital (which is to be sold) and the issue of bonds to the value of £6000 (all taken up privately by friends and well-wishers), will provide the full amount necessary. Plans and estimates have been prepared; the new building will be begun this year, and it will be known as "The British Seamen's and King Edward VII. Memorial Hospital." The generous manner in which many Uruguayan commercial firms subscribed towards this memorial testifies in an eloquent manner to the warmth of Anglo-Uruguayan friendship.

CHILDREN'S COUNTRY HOLIDAYS FUND.

To the Editor of THE LANCET.

SIR,—I venture to ask the hospitality of your columns on behalf of the Children's Country Holidays Fund. The object of the Fund is to send to the country for a fortnight the children of the poorest classes in London. Those of us who are now enjoying our annual holidays are best able to realise what such a fortnight must mean to children whose horizon would otherwise always be bounded by streets and slums, and we venture to appeal for assistance in order to carry out this work.

The expenses of the Fund increase annually, and this year they have been exceptionally heavy, and unless we are able to speedily obtain the sum of £3000 the work of the Fund will have to be seriously curtailed. Subscriptions and donations will be gratefully received and acknowledged by me here.—I am, Sir, yours faithfully,

ARRAN,
Honorary Treasurer, Children's Country Holidays Fund.

18, Buckingham-street, Strand, W.C., August 31st, 1911.

SOME SAMOAN DISEASES.

Mr. T. Trood, Acting British Vice-Consul for Samoa (or Navigator Islands), in his report for 1910 describes a visit to Samoa from Dr. N. Leber, of the Imperial University Hospital for Eye Diseases, Berlin, and Dr. von Provaczek, from the Institute for Ship and Tropical Diseases, Hamburg. These gentlemen investigated the epidemic eye diseases prevalent in Samoa for several years, their main object being to find out the causes as well as the means whereby they can be stamped out. Their visit was a great boon to the islands, for many of the native inhabitants were suffering from eye diseases. Their treatment has been singularly successful, for the Government having brought them out,

they rendered advice gratis to all native patients. The report says further: "Dr. von Provaczek has made experiments regarding the 'hook-worm' disease and other tropical complaints. He has also examined horses suffering from disease peculiar to the climate, and, I am told, strongly recommends the appointment for Samoa of a veterinary surgeon. In Tutuila for many months past the medical gentlemen attached to the Government staff and navy have been combating the 'hook-worm' disease, very prevalent there formerly, with great advantage to the Tutuila residents, foreigners as well as natives."

A WARNING.

To the Editor of THE LANCET.

SIR,—A consulting-room thief is on the warpath, and his method is a variant on some older ones. He is a foreigner—German, I think—speaking English indifferently. He presented a card bearing the name of a Toronto firm (which I forget), and had a slip of paper on which was written the title of an old article of mine. He was anxious to get this and any other useful books and pamphlets, explaining that a large sum of money had been left for the purpose of forming a library. I paid little heed to his incoherent story, and, being anxious to get rid of him, I told him to apply to THE LANCET Office, and left the room for less than a minute to get the date of the article from the Medical Directory. He was profuse in thanks and apologies, and backed himself—and my opera-glasses—out of the house. As my house is a home for nerve cases and bears no professional plate, and is situated in a retired spot, the thief must have had local knowledge.

I am, Sir, yours faithfully,

St. George's-terrace, N.W., Sept. 5th, 1911. J. SCOTT BATTAMS.

*** Dr. Scott Battams has perhaps made the acquaintance of a gentleman against whom the profession was warned in THE LANCET of August 5th, 1911 (p. 419).—ED. L.

"A GATE BEAUTIFUL."

THIS is the title of a sixpenny publication issued from the offices of the Ragged School Union, 32, John-street, Bedford-row, London, W.C. Tens of thousands of children in London are beneficiaries of its activity, which is expended in looking after the health, food, clothing, religious training, physical development, and recreation of the little dwellers in "slum-land," the "drift children." It is profusely illustrated, the pictures giving a good insight into the far-reaching domain of its work. The Ragged School Union was one of the fortunate recipients of a gift, on the apportionment of the King, out of the munificent sum left by the Maharaja of Gwalior for distribution. A picture on the cover shows a boy scout helping along a little cripple.

WEATHER INSTRUMENTS FOR AMATEUR METEOROLOGISTS.

WE have received a sixpenny booklet entitled "Weather Instruments and How to Use Them," by Mr. D. W. Horner, which describes in clear and simple language the meteorological instruments employed at the "second order" stations of the Royal Meteorological Society. It is intended as a companion work to the author's little handbook on "Observing and Forecasting the Weather," and both are published by Witherby and Co., 326, High Holborn, London, W.C. There must be many people who take a mildly scientific interest in the weather, and who would like to know how to set up and read and take care of, or at least how to understand, such common meteorological instruments as the rain gauge, the wet and dry bulb thermometer, the barometer, the sunshine recorder, and the wind gauge. This small work tells them how to do so in a very readable way. Every amateur who reads it will in future study the weather reports in the newspapers with new interest and understanding, and will be able, if he wishes, to make his own meteorological observations and records in a scientific manner.

H.—(1) The costs are very usually borne by both in common; (2) there is no such place, charitable institutions being compelled to decline such responsibilities.

Everybody's Mug has not confided his name and address to us.

ERRATUM.—*Anderson's College Medical School, Glasgow.*—We are informed by the house superintendent of the Glasgow Maternity and Women's Hospital, which is alluded to in our Students' Number under the heading of this school, that the fee for students for three months' attendance at the hospital is 4 guineas and 2 guineas for the nine months immediately following; and not, as was stated in the Students' Number, 3 guineas for six months.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement.

The following Congresses, Conferences, and Exhibitions are announced for September, 1911:—

April–October.—**Rome Exhibition (United Italy's Jubilee).**
,, 29th–Oct. 26th (Turin).—**International Exhibition.**
May 3rd–Oct. 31st (Glasgow).—**Scottish Exhibition.**
,, 6th–Oct. 31st (Dresden).—**International Hygiene Exhibition (British Section opens June 14th).**
May 12th–Oct. 31st (London, Crystal Palace).—**Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)**
May 18th–October 31st (London, Shepherd's Bush).—**Coronation Exhibition.**
,, 19th–Oct. 31st (London).—**Earl's Court Exhibition.**
August 28th–Sept. 11th (South-East of France).—**Eleventh "Voyage d'Etudes Médicales."**
Sept. 2nd–9th (London).—**Bakers' and Confectioners' Exhibition.**
,, 4th–9th (Yarmouth).—**Sanitary Inspectors' Association. Annual Conference.**
,, 9th–11th (Ostend).—**Fifteenth Flemish Nature and Medical Congress.**
,, 9th–20th (Turin).—**International Congress of the Applications of Electricity.**
,, 11th–13th (Vienna).—**German Urological Society.**
,, 11th–13th (Berlin).—**Third International Conference on Infantile Mortality (*Gouttes de Lait*).**
,, 11th–16th (The Hague).—**Thirteenth International Congress on Alcoholism.**
,, 12th–15th.—**Celebration of the 500th Anniversary of the Foundation of the University of St. Andrews.**
,, 17th–20th (Turin).—**Second National Congress of Guardians of Training Schools and Prisons.**
,, 18th–23rd (Sydney).—**Australasian Medical Congress.**
,, 18th–23rd (Paris).—**International Conference of Genetics.**
,, 23rd–Oct. 21st (London, Olympia).—**Electrical Exhibition.**
,, 24th–30th (Karlsruhe).—**Eighty-third Meeting of German Physicists and Physicians.**
,, 26th–28th (Louisville, Ky.).—**American Association of Obstetricians and Gynecologists.**
,, 26th–30th (Brussels).—**Third Congress of the International Society of Surgery and Exhibition of Fractures.**
,, 28th and 29th (Manchester).—**Conference of British Hospitals Association.**
,, 28th–30th (Dresden).—**International Congress for the Protection of Mothers and Sexual Reform.**
,, 29th (Edinburgh).—**Association of Veterinary Officers of Health. Annual Meeting.**
,, 30th (Bruges).—**Sixth Belgian Congress of Neurology and Psychiatry.**
September (Genoa).—**International Exhibition of Marine Hygiene.**
,, (Turin).—**Congress of the Association of Italian Railway Physicians.**
September–November (Antwerp).—**International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.**

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

TUESDAY.—4 P.M., Dr. P. Stewart: Clinique (Medical).
WEDNESDAY.—4 P.M., Mr. I. Back: Clinique (Surgical).
THURSDAY.—4 P.M., Dr. C. Wall: Clinique (Medical).
FRIDAY.—4 P.M., Mr. R. E. Bickerton: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women.
THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON) Clinical Theatre, London Hospital, Mile End-road, E.

MONDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Wall: Pulmonary Diseases.
TUESDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Grünbaum: Diseases giving rise to Morbid Renal Excretion.
THURSDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Head: Diseases of the Nervous System.
FRIDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. L. Smith: Diseases of the Heart.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (13th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (14th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (16th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1911, which was completed with the issue of June 24th, were given in THE LANCET of July 1st.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1911 are now ready. Bound in cloth, gilt lettered, price 16*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 1 0	One Year	£1 5 0
Six Months	0 12 6	Six Months	0 14 0
Three Months	0 6 6	Three Months	0 7 0

(The rate for the United Kingdom will apply also to Medical Subordinates in India whose rates of pay, including allowances, is less than Rs.50 per month.)

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

TO COLONIAL AND FOREIGN SUBSCRIBERS.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—Messrs. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 6th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Aug. 31	30·27	S.W.	0·11	118	75	54	56	58	Fine
Sept. 1	30·19	S.W.	...	121	79	55	58	61	Fine
,, 2	30·07	S.E.	...	129	89	60	63	69	Fine
,, 3	30·22	N.W.	...	109	76	61	62	65	Cloudy
,, 4	30·29	E.	...	110	74	60	61	64	Cloudy
,, 5	30·21	N.E.	...	110	79	61	60	63	Fine
,, 6	30·27	S.	...	119	84	60	60	64	Fine

The following journals, magazines, &c., have been received:—Medical Chronicle, School Hygiene, Annals of Tropical Medicine and Parasitology, Guy's Hospital Gazette, Indian Public Health and Municipal Journal, Transvaal Medical Journal, Practitioner, Archives of Pediatrics, Archives of the Roentgen Ray, Public Health, Edinburgh Medical Journal, Monthly Cyclopædia and Medical Bulletin, Polyclinic, International Journal of Surgery, Dominion Medical Monthly and Ontario Medical Journal, Journal of the Royal Sanitary Institute.

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